

In The Matter Of:

*JACK W. LEACH, et al. v.
E.I. DU PONT DE NEMOURS & COMPANY*

BRUCE W. KARRH, M.D.

April 14, 2004

*VIDEOTAPED
DEPOSITION*

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[1] IN THE CIRCUIT COURT FOR THE COUNTY OF WOOD
STATE OF WEST VIRGINIA
[2]
[3] JACK W. LEACH, et al.,)
[4] Plaintiffs,)
[5]) CIVIL ACTION
vs.)
[6]) FILE NO. 01-C-608
E.I. DU PONT DE NEMOURS)
[7] AND COMPANY,) (Judge George W.
) Hill)
[8] Defendant.)
[9]
[10]
[11] VIDEOTAPED DEPOSITION OF
[12] BRUCE W. KARRH, M.D.
[13]
[14] April 14, 2004
[15]
9:10 a.m.
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[17]
[18] 110 Jefferson Street
Savannah, Georgia
[19]
[20]
[21] Mynjuan P. Jones, B-1422
[22]
[23]
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[25]

[1] APPEARANCES OF COUNSEL
[2]
[3] On behalf of the Plaintiffs:
[4] ROBERT A. BILOTT, Esq.
Talt, Stettinius & Hollister LLP
[5] 424 Walnut Street
Suite 1800
[6] Cincinnati, Ohio 45202-3957
[7] R. EDISON HILL, Esq.
Hill, Peterson, Carper, Bee & Deitzler, PLLC
[8] NorthGate Business Park
500 Tracy Way
[9] Charleston, West Virginia 25311-1261
[10] On behalf of the Defendant:
[11] DOUGLAS G. GREEN, Esq.
Steptoe & Johnson LLP
[12] 1330 Connecticut Avenue, NW
Washington, D.C. 20036-1795
[13]
DAVID B. HANNA, Esq.
[14] Spilman Thomas & Battle
Spilman Center
[15] 300 Kanawha Boulevard, East
Post Office Box 273
[16] Charleston, West Virginia 25321-0273
[17]
[18] Videographer: Hillary Heard
[19]
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4--00:01:48 25--00:05:49

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[1] (Reporter disclosure made pursuant to
[2] Article 8.B. of the Rules and Regulations
[3] of the Board of Court Reporting of the
[4] Judicial Council of Georgia.)
[5] BRUCE W. KARRH, M.D.,
[6] having been first duly sworn, was examined and
[7] testified as follows:

[8] EXAMINATION
[9] BY MR. BILOTT:

[10] Q: Good morning. My name is Rob Bilott and
[11] I'm an attorney representing the plaintiffs in the
[12] lawsuit styled Leach, et al., versus E.I. Du Pont De
[13] Nemours and Company, pending in State Court of West
[14] Virginia.

[15] Would you state your name, please.

[16] A: Bruce Karrh.

[17] Q: Is that Dr. Bruce Karrh?

[18] A: Yes. I have an M.D. degree.

[19] Q: Have you ever had your deposition taken
[20] before?

[21] A: Yes.

[22] Q: How many times?

[23] A: I don't know, several times.

[24] Q: When was the last time you had your
[25] deposition taken?

1--00:05:49 25--00:06:47

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[1] A: January of this year.

[2] Q: And although it hasn't been that long
[3] since your last deposition, I'm going to go over some
[4] of the instructions on how the deposition process
[5] will work.

[6] Today I'm going to be asking you a series
[7] of questions, some of which may involve events that
[8] occurred a long time ago, and I ask that you give me
[9] your best recollection.

[10] And if at any point in time you don't
[11] understand a question or you need any clarification,
[12] please let me know and I'll go back and try to
[13] clarify or explain the question.

[14] A: All right.

[15] Q: Otherwise I'm going to assume that you've
[16] understood the question and given me your best
[17] recollection and response.

[18] A: All right.

[19] Q: If at any point in time you feel like you
[20] need to take a break for any reason, let me know;
[21] otherwise we'll just announce breaks at reasonable
[22] times during the day today. Okay?

[23] A: That sounds fine.

[24] Q: Your testimony is going to be transcribed
[25] today by the court reporter in written form, also on

1--00:06:50 25--00:07:53

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[1] videotape, and for purposes of making sure the
[2] written transcript is clear, please make sure you
[3] wait until the question is finished before providing
[4] your response so it's clear on the transcript what
[5] was said. Okay?
[6] A: All right.
[7] Q: And please try to verbalize all the
[8] responses as well as opposed to shaking the head or
[9] nodding because again we want to make sure the
[10] written transcript is as clear as the video. Okay?

[11] A: Yes.

[12] Q: Are you presently employed?

[13] A: No.

[14] Q: What is your current home address?

[15] A: 7 Pepper Bush Circle, Savannah, Georgia,
[16] 31411.

[17] Q: And when did you first move to that
[18] address?

[19] A: In May 20th of 2002.

[20] Q: What was your address prior to that?

[21] A: 5 Creek Marsh Lane, Savannah, Georgia,
[22] 31411.

[23] Q: When did you first move to Savannah?

[24] A: I moved to Savannah July the 15th of 1996.

[25] Q: What is your date of birth?

1--00:08:00 25--00:09:16

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[1] A: August 29th, 1936.

[2] Q: So that makes you how old?

[3] A: Sixty-seven.

[4] Q: Are you taking any medications of any kind
[5] that could affect your memory in any way?

[6] A: No.

[7] Q: Have you been prescribed any medications
[8] that taken could affect your memory in any way?

[9] A: No.

[10] Q: Were you at any point in time employed by
[11] E.I. Du Pont De Nemours and Company?

[12] A: Yes, I was.

[13] Q: Is it okay if we refer to that company as
[14] Du Pont today?

[15] A: That would be fine with me.

[16] Q: During what period of time were you
[17] employed by Du Pont?

[18] A: I was employed two different times. I
[19] first went to work for Du Pont in 1958, probably the
[20] end of May 1958, until the first of September of 1958
[21] as a laboratory technician at the Birmingham, Alabama
[22] plant.

[23] Then I was reemployed by Du Pont August
[24] the 1st of 1970 and was a full-time employee of
[25] Du Pont until March 31st of 1996.

1—00:09:20 25—00:10:31

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[1] Q: You say a full-time employee until March
[2] 1st of '96. Did you maintain any sort of employment
[3] relationship with Du Pont after March 1st of 1996?
[4] A: Not as an employee.
[5] Q: In what way did you maintain any sort of
[6] relationship —
[7] A: I have served as a consultant a few times
[8] for Du Pont.
[9] Q: A few times. What was the first time you
[10] served as a consultant to Du Pont after March 1st of
[11] '96?
[12] A: I don't remember the dates of it, several
[13] times on depositions. I have been deposed several
[14] times since I retired in 1996 in cases in which
[15] Du Pont was involved.
[16] Q: In each of these circumstances that you
[17] described as being a consultant for Du Pont since
[18] March 1 of '96, did each of those circumstances
[19] involve a deposition?
[20] A: Yes.
[21] Q: What was your position with Du Pont at the
[22] point you — well, let me rephrase the question this
[23] way.
[24] What happened with respect to your
[25] employment with Du Pont on March 1, '96? Did you

1—00:10:35 25—00:11:48

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[1] retire?
[2] A: You have the wrong date. I retired March
[3] 31 of '96.
[4] Q: I'm sorry. March 31.
[5] A: And I did retire at that time.
[6] Q: What position did you hold with Du Pont at
[7] the time that you retired?
[8] A: I was vice president, integrated health
[9] care.
[10] Q: You were corporate medical director for
[11] Du Pont, correct?
[12] A: At one point in time.
[13] Q: During what period of time?
[14] A: From 1977, April I think it was of 1977
[15] until April of 1983.
[16] Q: 1983?
[17] A: Yes.
[18] Q: We'll go back to your employment history
[19] here in a few minutes.
[20] A: Okay.
[21] Q: How did you first learn about your
[22] deposition today?
[23] A: I was informed by counsel that I was to be
[24] deposed.
[25] Q: Who was that?

1—00:11:49 25—00:12:55

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[1] A: It was an in-house counsel with Du Pont, a
[2] gentleman named John Bowman.
[3] Q: Was this through a telephone conversation
[4] or written communication of some sort?
[5] A: Telephone conversation.
[6] Q: When was that; do you recall?
[7] A: No, I don't.
[8] Q: Was it within the last year?
[9] A: Yes.
[10] Q: Do you know whether anybody else other
[11] than Mr. Bowman was on the telephone with you during
[12] that particular conversation?
[13] A: To my knowledge during that conversation
[14] no one else was on the phone except Mr. Bowman.
[15] Q: At that particular point in time were you
[16] employed by Du Pont?
[17] A: No.
[18] Q: Had you asked Mr. Bowman to serve as your
[19] counsel during — when he called you on that
[20] particular date?
[21] A: Not at that point in time.
[22] Q: What did Mr. Bowman tell you during that
[23] telephone conversation?
[24] A: He just told me that I was to be deposed
[25] in the case that you referenced earlier and that they

1—00:12:58 25—00:13:46

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[1] were looking for a date and wanted to know what my
[2] availability was, what my dates of availability were
[3] that might coincide with when the deposition would be
[4] taken.
[5] Q: And did he mention what the case was you
[6] were requested for a deposition in?
[7] A: Not by title. He mentioned what it
[8] involved.
[9] Q: What did he say it involved?
[10] A: It involved a particular chemical
[11] substance and it involved a situation in West
[12] Virginia and Ohio.
[13] Q: And what particular chemical substance
[14] were you told it involved?
[15] A: A material that's called C-8, ammonium
[16] perfluorooctanoate.
[17] Q: And had you heard of that particular
[18] chemical before?
[19] A: Yes.
[20] Q: What were you told — how did this case
[21] involve C-8?
[22] MR. GREEN: You're still talking about the
[23] conversation before there was an attorney-client
[24] relationship.
[25] MR. BILOTT: That's correct.

1—00:13:46 25—00:14:54

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[1] Q: (By Mr. Bilott) Let me clarify the
[2] question. During this particular telephone
[3] conversation with Mr. Bowman when he first contacted
[4] what, if anything, did he tell you about this
[5] particular case and how it involved C-8?

[6] A: He told me there was a lawsuit that
[7] involved C-8 because of alleged groundwater
[8] contamination and possible drinking water
[9] contamination.

[10] Q: Possible drinking water contamination?

[11] A: Uh-huh.

[12] Q: Had you heard of this particular lawsuit
[13] before that telephone call?

[14] A: I think I had, yes, through again
[15] Mr. Bowman had told me in the past that this lawsuit
[16] was moving along and that I was likely to be called
[17] as a witness for a deposition in the lawsuit.

[18] Q: So you had had conversations with
[19] Mr. Bowman in the past before this one telephone
[20] conversation in which the C-8 lawsuit was brought up?

[21] A: Yes.

[22] Q: Let's go back to the first time you had
[23] such a conversation. Do you remember when that was?

[24] A: No, I don't.

[25] Q: Was it during a point in time when you

1—00:15:00 25—00:15:59

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[1] were no longer employed with Du Pont?

[2] A: It was after I had retired.

[3] Q: How many such conversations had you had
[4] with Mr. Bowman prior to this particular telephone
[5] call when he called to tell you you had been
[6] requested for a deposition?

[7] A: I don't recall.

[8] Q: More than one?

[9] A: Yes, more than one.

[10] Q: More than a dozen?

[11] A: Mr. Bowman was Du Pont in-house counsel
[12] that I had worked with while I was working. We had a
[13] lot of other situations where he and I had worked
[14] together. We had many conversations over the years
[15] involving a lot of different things.

[16] I don't recall specifically when he first
[17] mentioned to me a C-8 lawsuit but I know it was more
[18] than one. I don't know if it was a dozen. It could
[19] have been two. It could have been more than a dozen.
[20] I don't know.

[21] Q: During these conversations with Mr. Bowman
[22] when he had mentioned something about the C-8
[23] lawsuit, what had he told you about the C-8 lawsuit,
[24] if you recall?

[25] A: I don't recall the specifics of the

1—00:16:01 25—00:16:54

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[1] conversation. He and I just discussed the fact that
[2] there was a lawsuit and that because of my
[3] involvement with C-8 in the past I was likely to be a
[4] witness and be deposed for it.

[5] Q: Did he tell you in what capacity you were
[6] likely to be a witness, on what topics?

[7] A: No.

[8] Q: Did Mr. Bowman ask you for any documents
[9] of any kind?

[10] A: No.

[11] Q: Did you give Mr. Bowman any documents of
[12] any kind?

[13] A: No.

[14] Q: Were you asked to look for any documents
[15] prior to your deposition here today?

[16] A: No.

[17] Q: Did anyone ask you whether you had any
[18] documents relating to C-8 prior to the deposition
[19] here today?

[20] A: Yes.

[21] Q: And who was that?

[22] A: Mr. Green.

[23] Q: And at that point did you have any
[24] documents relating to C-8?

[25] A: No.

1—00:16:54 25—00:18:06

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[1] Q: After you retired from Du Pont did you
[2] take any documents — let me rephrase that question.

[3] After you retired from Du Pont did you
[4] have any documents in your personal possession that
[5] referred to C-8 in any way?

[6] A: When I left Du Pont, any documents that I
[7] had were Du Pont property. I left all of those
[8] documents with Du Pont when I retired.

[9] Q: Do you have a computer at your home?

[10] A: Yes, I do.

[11] Q: Do you know whether you ever sent or
[12] received any e-mails to anybody at Du Pont from your
[13] home computer?

[14] A: I don't recall ever sending e-mails to
[15] Du Pont — I'm sorry. I did too. I e-mailed with my
[16] former secretary once or twice on some issues that
[17] had to do with various things while she and I worked
[18] together but it was very, very rare and I haven't
[19] sent one for many years now, several years, three or
[20] four years.

[21] Q: Any of those e-mails have anything to do
[22] with C-8 or litigation in West Virginia?

[23] A: No.

[24] Q: Did you send any e-mails or receive any
[25] e-mails to any counsel of Du Pont like John Bowman or

1—00:18:10 25—00:22:50

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[1] anybody else?
[2] A: I sent an e-mail to John Bowman — no.
[3] I'm sorry. That's not true. I sent a letter, not an
[4] e-mail, recently but it had nothing to do with C-8.
[5] Q: What did it deal with?
[6] A: It dealt with a particular book that had
[7] been written — had an erroneous reference to a
[8] particular material that I wanted him to clarify for
[9] me.
[10] Q: What material was that?
[11] A: Agent orange.
[12] MR. BILOTT: If we could take a short
[13] break for a second.
[14] (A recess was taken)
[15] Q: (By Mr. Bilott) Okay. We're back from
[16] just a short break.
[17] Dr. Karrh, getting back to your home
[18] computer, have you sent e-mails or received e-mails
[19] to anyone else other than Du Pont counsel or
[20] employees of Du Pont about anything to do with C-8 or
[21] any litigation in West Virginia?
[22] A: No.
[23] Q: You mentioned you had had depositions
[24] before, right?
[25] A: Yes.

1—00:22:51 25—00:23:49

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[1] Q: The most recent one being sometime earlier
[2] this year; is that correct?
[3] A: In January of '04.
[4] Q: How many depositions have you participated
[5] in?
[6] A: There have been several. I don't know an
[7] exact number.
[8] Q: More than a dozen?
[9] A: Yes.
[10] Q: More than two dozen?
[11] A: Yes.
[12] Q: More than three dozen?
[13] A: Yes.
[14] Q: What's your best estimate?
[15] A: In the deposition in January I was asked
[16] the same question and I guessed around 50 at that
[17] time. This would make 51.
[18] Q: How many of those, if any, have been both
[19] videotaped?
[20] A: Approximately 10, 12.
[21] Q: How many, if any, of those depositions
[22] occurred after you left the employment of Du Pont?
[23] A: Approximately 10 or 12, in that range.
[24] Q: Who, if anyone, represented you during
[25] those depositions?

1—00:23:50 25—00:25:01

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[1] A: I've had various attorneys, mostly outside
[2] counsel but also some inside counsel with Du Pont.
[3] Q: During any of those depositions after you
[4] left the employment of Du Pont were you represented
[5] by anyone who was not an attorney for Du Pont?
[6] A: I would have to understand your definition
[7] of attorney for Du Pont. I have been represented by
[8] Du Pont in-house counsel, Du Pont employee counsel,
[9] and I have also been represented by Du Pont outside
[10] counsel that was on a retainer or consultant basis
[11] for Du Pont both.
[12] Q: Have you been represented by anyone who
[13] didn't fit either of those two categories?
[14] A: No, I haven't.
[15] Q: Were you ever compensated for your time
[16] during any of the depositions that you gave?
[17] A: Yes.
[18] Q: How many times were you compensated?
[19] A: I'm compensated every time that I'm
[20] deposed.
[21] Q: At what rate are you compensated?
[22] A: First I get a pension from Du Pont as an
[23] earned pension that all employees if they reach a
[24] certain amount of service and age are entitled to and
[25] so I get that pension. I also get an hourly rate of

1—00:25:07 25—00:26:30

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[1] compensation and it's \$350 an hour and expenses.
[2] Q: And are you getting paid that rate for a
[3] deposition here today?
[4] A: Yes, I am.
[5] Q: And who is paying that rate?
[6] A: The Du Pont company.
[7] Q: What is your pension from Du Pont?
[8] A: Dollar amount —
[9] Q: Yes.
[10] A: Approximately \$4,000 a month.
[11] Q: Do you currently own any Du Pont stock?
[12] A: Yes, I do.
[13] Q: How much stock?
[14] A: I have about 3,000 shares now.
[15] Q: Has the amount of your Du Pont stock
[16] fluctuated in any significant degree over the last —
[17] since you left your employment at Du Pont?
[18] MR. GREEN: The amount or the value?
[19] MR. BILOTT: The amount of stock.
[20] THE WITNESS: The number of shares?
[21] Q: (By Mr. Bilott) Yes.
[22] A: Has decreased steadily because I use that
[23] as ways to fund my grandchildren's education.
[24] Q: In addition — other than the depositions
[25] you mentioned, have you ever testified at a trial?

1--00:26:35 25--00:27:45

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[1] A: Yes, I have.
[2] Q: How many times?
[3] A: Probably four or five times.
[4] Q: Were any of those after you had left the
[5] employment of Du Pont?
[6] A: No.
[7] Q: During any of those trials did you provide
[8] any testimony that you understood was being offered
[9] as an expert witness testimony?
[10] A: Yes.
[11] MR. GREEN: Object to the form of the
[12] question.
[13] Q: (By Mr. Bilott) Do you understand the
[14] question?
[15] A: Could you repeat it, please.
[16] Q: Do you recall ever providing testimony at
[17] a trial during which your testimony was being offered
[18] as expert testimony?
[19] MR. GREEN: Still object to the form.
[20] THE WITNESS: Yes.
[21] Q: (By Mr. Bilott) How many times?
[22] A: Probably all of them, I'm sorry, with the
[23] exception of one.
[24] Q: And in each of those four or five trials
[25] were you testifying on behalf of Du Pont?

1--00:27:48 25--00:29:12

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[1] A: In only one.
[2] Q: Only one?
[3] Who were you testifying on behalf of the
[4] other times?
[5] A: Whoever the plaintiff was or the
[6] defendant, depending on the circumstances.
[7] Q: Let's go through each one of these.
[8] Starting with the first trial you remember providing
[9] testimony in, who did you provide testimony on behalf
[10] of?
[11] A: At that time it was on behalf of the
[12] county in the state of Alabama.
[13] Q: And who were you employed by at the time?
[14] A: Myself.
[15] Q: What year was that?
[16] A: It would have been somewhere in the 1967,
[17] '68 time frame.
[18] Q: What did that particular trial involve?
[19] A: A stepfather had raped a two-year-old girl
[20] and I had treated the girl.
[21] Q: What was the next trial you recall
[22] providing testimony in?
[23] A: There was an automobile accident case in
[24] which the plaintiff had come to me for treatment and
[25] I had treated him.

1--00:29:13 25--00:30:13

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[1] Q: Was this when you were in private
[2] practice?
[3] A: That was when I first went to work for
[4] Du Pont so that would have been somewhere in the
[5] 1970, '71 time frame.
[6] Q: Was the plaintiff a Du Pont employee?
[7] A: Yes, he was.
[8] Q: And who did you provide the testimony on
[9] behalf of during that trial?
[10] A: Plaintiff.
[11] Q: What was the next time you recall
[12] providing trial testimony?
[13] A: 1973 -- '72.
[14] Q: What did that particular case involve?
[15] A: A personal injury case where a cola bottle
[16] had exploded and cut the nerves and tendons out of a
[17] person's wrist.
[18] Q: Was the person a Du Pont employee?
[19] A: No.
[20] Q: Who were you providing testimony on behalf
[21] of in that case?
[22] A: The plaintiff.
[23] Q: Who was the plaintiff employed by?
[24] A: Not employed.
[25] Q: Who were you employed by at the time?

1--00:30:17 25--00:31:20

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[1] A: Du Pont.
[2] Q: Do you understand why you were providing
[3] testimony on behalf of a non-Du Pont employee in that
[4] particular trial?
[5] A: The plaintiff was my wife.
[6] Q: What was the next trial you recall
[7] providing testimony in?
[8] A: Unjust discharge case.
[9] Q: Did this involve a Du Pont employee?
[10] A: Yes.
[11] Q: Do you remember what time period this was
[12] in?
[13] A: Probably in the late seventies, '78, '79
[14] time frame.
[15] Q: During the time period that you were the
[16] Du Pont medical director?
[17] A: Yes.
[18] Q: Was it a Du Pont employee? I'm sorry.
[19] A: Former Du Pont employee.
[20] Q: And on what topic were you providing
[21] testimony?
[22] A: My testimony dealt with she was discharged
[23] from her job as a nurse for Du Pont. She alleged
[24] that it was an unjust discharge.
[25] My testimony was her very bizarre behavior

1—00:31:26 25—00:32:43

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[1] in the workplace and as a nurse and that was the
[2] testimony that I provided.

[3] Q: What was the next trial you recall
[4] providing any testimony in?

[5] A: I don't think I've been to trial, through
[6] an actual trial since then. I think that was the
[7] last courtroom trial I was in.

[8] Q: Have you ever been asked to provide a
[9] written report for Du Pont to be used at a trial?

[10] A: I don't recall being asked to do that.

[11] Q: Have you ever been asked to sign an
[12] affidavit or a statement of any kind to be used by
[13] Du Pont in a trial?

[14] A: Yes, I have.

[15] Q: How many times?

[16] A: I don't — not many, not more than two or
[17] three.

[18] Q: What was the subject matter — what were
[19] the situations you recall in which you were asked to
[20] sign such statements or affidavits?

[21] A: I don't recall what they were. I honestly
[22] don't recall.

[23] Q: Have you been asked to sign any statement
[24] or written document of any kind in connection with
[25] this current case?

1—00:32:43 25—00:34:02

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[1] A: I was asked to sign an affidavit about ten
[2] days or two weeks ago and I can't recall specifically
[3] what case it dealt with.

[4] Q: What was the subject matter of the
[5] affidavit?

[6] A: That's what I don't recall.

[7] Q: Who asked you to sign the document?

[8] A: Outside counsel and — I don't remember
[9] for sure who asked me to sign it.

[10] Q: Do you have any recollection of what the
[11] matter was that this affidavit or statement —

[12] A: No, I don't because the affidavit was sent
[13] to me by fax. I reviewed it, made some comments on
[14] it, faxed it back. They faxed back a final. I
[15] signed it, faxed it back to them.

[16] And I don't recall — I don't keep a
[17] record of these things and to me it was — it
[18] interfered with my golf game and a few other things
[19] that day and so I didn't make a mental note of it or
[20] write down anything about it.

[21] Q: Do you have a copy of it still?

[22] A: No, I don't.

[23] Q: Where is it? What did you do with the
[24] copy you got by fax?

[25] A: Destroyed it, put it in the garbage. I

1—00:34:06 25—00:34:55

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[1] don't keep records at home.

[2] Q: You say you got it and you made some
[3] comments on it. Do you remember what you were
[4] commenting on?

[5] A: Primarily wording, wording comments,
[6] correcting some of the wording.

[7] Q: Do you remember what you were correcting?

[8] A: No, I don't.

[9] Q: Do you remember anything at all about the
[10] content or subject matter of that document?

[11] A: No, I honestly don't. It's one of those
[12] things that came in. It was asking me to affirm to a
[13] fact.

[14] I reviewed it. I made the comments to
[15] make sure that the facts were right. I faxed it
[16] back.

[17] They sent me back the final that
[18] incorporated my comments. I signed it, faxed it
[19] back, and destroyed the copy of it.

[20] Q: Do you know whether it involved C-8 in any
[21] way?

[22] A: I honestly don't recall what it involved
[23] because I have several different situations right now
[24] that have come up as far as my former employment with
[25] Du Pont they were working on at various times and one

1—00:34:59 25—00:36:02

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[1] will come up one week, another one come up another
[2] week and so I don't recall specifically what that
[3] was, what it dealt with.

[4] Q: Do you recall any situation other than
[5] that one where you were sent something to sign or
[6] edit or comment on by Du Pont after you've left their
[7] employment?

[8] A: Well, there have been two or three
[9] situations similar to that, about affidavits, but
[10] every time I have a deposition I have to comment and
[11] correct the deposition record, the transcript, and
[12] I've had several of those.

[13] Q: The actual transcript?

[14] A: Yes.

[15] Q: Do you recall any situations other than
[16] this one you've just described to us where you got
[17] something other than a transcript and you were asked
[18] to sign it or edit it in any way?

[19] A: I recall that there had been two or three
[20] but I don't specifically recall what they were.

[21] Q: And would you have kept any of those other
[22] two or three documents?

[23] A: No. I'd have no reason to.

[24] Q: And what would be done with those?

[25] A: Put in my garbage at home.

1—00:36:09 25—00:38:02

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- [1] Q: I'd like to go back to the depositions.
[2] You mentioned you've participated in some I guess is
[3] it fair to say more than 50 depositions?
[4] A: I would say approximately 50.
[5] Q: How many of those depositions involved
[6] your providing any testimony with respect to your
[7] duties as a medical doctor for Du Pont?
[8] A: Almost all of them.
[9] Q: How many of those involved any questions
[10] dealing with your recommendations for how to respond
[11] to any particular health hazard from a particular
[12] chemical?
[13] A: Many of them have. I couldn't give you a
[14] number but many of them, perhaps half of them, at
[15] least half of them.
[16] Q: Do you recall during any of those
[17] depositions the cases involving claims that your
[18] particular decisions were incorrect?
[19] A: No.
[20] Q: Did any of those prior depositions involve
[21] anything to do with any perfluorinated chemicals or
[22] materials of any kind?
[23] A: I don't recall any of them dealing with
[24] perfluorinated chemicals.
[25] Q: Any of them deal with any telomer

1—00:38:10 25—00:39:27

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- [1] material?
[2] A: Not to my recollection.
[3] Q: I'd like to — we'll come back to those in
[4] a minute but I want to go back and sorry to bounce
[5] around here but I want to get your employment history
[6] clear here.
[7] A: Okay.
[8] Q: I may be able to try to speed through this
[9] a little. Let me see if I understand this correctly.
[10] You were a military physician for about three years?
[11] A: Yes.
[12] Q: Was that between about 1962 and 1965?
[13] A: That's correct.
[14] Q: And then where did you perform your
[15] services for the military during that period of time?
[16] A: Well, I was first at Brook General
[17] Hospital in San Antonio, Texas, for a year. Then I
[18] went to the U.S. Army medical field service school
[19] also in San Antonio for two months. Then I went to
[20] the U.S. Air Force School of Aerospace Medicine also
[21] in San Antonio for three months.
[22] Then I went to the U.S. Army School of
[23] Aviation Medicine in Fort Rucker, Alabama, for a
[24] month, and then I went to the U.S. Army Primary
[25] Helicopter School in Mineral Wells, Texas, from

1—00:39:30 25—00:40:28

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- [1] November of '63 until July of '65.
[2] Q: When did you obtain your medical degree?
[3] A: In May of 1962.
[4] Q: And what particular degree do you have?
[5] A: A doctor of medicine degree.
[6] Q: Do you have any other degrees?
[7] A: I have a bachelor of science degree.
[8] Q: And where did you obtain that degree?
[9] A: University of Alabama.
[10] Q: What year?
[11] A: 1958.
[12] Q: Do you have any professional license or
[13] certifications of any kind?
[14] A: I'm licensed in four states, although
[15] three of the state licenses have gone inactive
[16] because I'm not in practice. I only have one active
[17] license. My active license is in the state of
[18] Alabama, inactive license in Georgia, Virginia, and
[19] Delaware.
[20] Q: I'm sorry. I was distracted a little bit.
[21] What states are you still active in?
[22] A: My active license is in the state of
[23] Alabama. My inactive licenses are in Delaware,
[24] Virginia, and Georgia.
[25] Q: Were you ever licensed in West Virginia or

1—00:40:30 25—00:41:28

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- [1] Ohio?
[2] A: No.
[3] Q: Any other licenses or certifications of
[4] any kind?
[5] A: I'm board certified.
[6] Q: In what?
[7] A: In occupational medicine by the American
[8] Board of Preventive Medicine.
[9] Q: And when did you first obtain that
[10] certification?
[11] A: 1977.
[12] Q: Have you maintained that certification
[13] since that time continuously?
[14] A: Yes.
[15] Q: Any other certifications of any kind?
[16] A: None that I recall.
[17] Q: During any particular trial or legal
[18] proceeding do you recall ever being designated an
[19] expert in any particular area?
[20] A: When you say trial or proceedings, I have
[21] been designated expert in proceedings.
[22] Q: What kind of proceedings?
[23] A: Congressional hearings.
[24] Q: What kind of expert?
[25] A: Several different areas, genetic testing,

1—00:41:32 25—00:42:46

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[1] on reproductive hazards, on medical record privacy,
[2] on — I testified before Congress 14 or 15 times and
[3] I don't recall each one of them, worker protection
[4] issues.

[5] Q: Do you recall ever testifying as an expert
[6] at a trial?

[7] A: I think we went over that earlier.

[8] MR. GREEN: Object to the form.

[9] Q: (By Mr. Bilott) Let me rephrase the
[10] question. Do you recall a judge ever designating you
[11] as an expert on anything in particular during a
[12] trial?

[13] A: Not to my recollection, not that the judge
[14] would designate me.

[15] Q: So getting back to your employment
[16] history, after you got your medical degree, was the
[17] military the first job you had?

[18] A: First full-time job, yes.

[19] Q: And you stayed with the military till
[20] about 1965; is that correct?

[21] A: Yes, that's correct.

[22] Q: And then you engaged in private practice
[23] in — private practice of medicine in Alabama for the
[24] next five years?

[25] A: That's correct.

1—00:42:47 25—00:43:53

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[1] Q: Till about 1970; is that right?

[2] A: Yes, that's right.

[3] Q: During your private practice in Alabama
[4] did you perform any services for Du Pont?

[5] A: No.

[6] Q: Did you treat any Du Pont employees during
[7] that period of time that you're aware of?

[8] A: Not that I'm aware of.

[9] Q: Did you treat or provide any services to
[10] the 3M Company employees?

[11] A: I may have 3M because 3M had a small plant
[12] in a small town next to the town where I practiced.

[13] Q: In what town were you practicing?

[14] A: I was practicing first in Winfield,
[15] Alabama, and 3M had a plant in Guin, Alabama. I
[16] practiced in Winfield for a year and a half and I may
[17] have treated 3M employees then but I would not have
[18] known it and I certainly don't recall it now.

[19] Q: Were you anywhere near Decatur?

[20] A: After a year and a half in Winfield I went
[21] to Athens, Alabama. Athens is 16 miles north of
[22] Decatur.

[23] Q: And again are you actually aware though of
[24] whether you were seeing any 3M employees of the 3M
[25] Decatur, Alabama plant?

1—00:43:57 25—00:44:55

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[1] A: To my recollection I did not but I may
[2] well have and just not know it.

[3] Q: You joined Du Pont then in 1970 as a plant
[4] doctor for a Richmond, Virginia plant of Du Pont; is
[5] that correct?

[6] A: Yes, that's correct.

[7] Q: Why did you take that position at that
[8] time?

[9] A: The position was advertised in the Journal
[10] of American Medical Association. Having been a
[11] flight surgeon, which is a form of occupational
[12] medicine, I enjoyed the work.

[13] When I was in private practice in small
[14] towns in Alabama, I did part-time occupational
[15] medicine for a variety of different companies that
[16] were in those towns. I enjoyed that work.

[17] I wanted to go into occupational medicine
[18] full-time and I answered an ad in the Journal of
[19] American Medical Association for a plant physician
[20] for Du Pont and I also looked at several other
[21] opportunities with other companies and I chose the
[22] Du Pont Richmond offer that was given to me.

[23] Q: What kind of materials, if you recall,
[24] were handled at the Du Pont Richmond plant?

[25] A: It was a fibrous plant. The biggest

1—00:45:01 25—00:46:37

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[1] product at that time was nylon fiber, primarily
[2] industrial fiber used for truck tire core. The other
[3] product was no-mix (phonetic), which is the high heat
[4] material that's used in space suits and flight suits.
[5] The other material was Tyvek which at that time was
[6] struggling but now it's what's used for house wrap
[7] and lightweight envelopes. The other material was
[8] Teflon fiber and then we put in a new product while I
[9] was there that subsequently became Kevlar.

[10] Q: During the time that you were plant
[11] physician for Du Pont in Richmond, Virginia, did you
[12] perform any sort of medical evaluation or testing on
[13] any of those Du Pont employees in connection with any
[14] exposures to perfluorinated chemicals?

[15] A: My job was to perform routine medical
[16] surveillance and monitoring and physical examinations
[17] on employees, and to my knowledge at that time we
[18] only had one area in which a perfluorinated compound
[19] was used and that was in the area that made Teflon
[20] fiber and I don't recall doing any specific testing
[21] on them as far as the perfluorinated compound was
[22] concerned.

[23] Q: In 1973 you were transferred to Du Pont's
[24] Haskell Laboratory for toxicology and industrial
[25] medicine as research manager in environmental

1—00:46:40 25—00:47:47

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[1] sciences, correct?

[2] A: Yes.

[3] Q: With responsibility for industrial hygiene
[4] and physiological evaluations, correct?

[5] A: Yes.

[6] Q: What does that mean?

[7] A: Haskell Laboratory had two research
[8] managers. One was the research manager for
[9] toxicology. The other one was research manager in
[10] environmental sciences. I was the ladder. That
[11] dealt with looking at workplace issues and trying to
[12] make sure that we had the proper knowledge as far as
[13] the workplace issues were concerned and then we had
[14] in place programs to help make sure that we were
[15] carrying out that knowledge that we had and looking
[16] for any other issues that may come up.

[17] The industrial hygienist would go to plant
[18] sites and do surveys, industrial hygiene surveys.
[19] The physiologists were looking at things like heat
[20] stress. We had some plants that had a fairly high
[21] heat environment so we were looking at heat stress.

[22] We were looking at noise exposure, whether
[23] or not people were suffering occupational noise or
[24] hearing loss as a result of workplace noise exposure.

[25] We were doing studies on some of the

1—00:47:51 25—00:48:52

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[1] perfluorinated compounds that were used as
[2] refrigerants and coolants.

[3] If you recall back in the early seventies
[4] there was a big problem with kids sniffing
[5] propellants and dying and we were doing studies to
[6] try to find out what was causing them to die when
[7] they sniffed these propellants, and those were the
[8] major studies we were doing.

[9] Q: And following your work at Haskell you
[10] were named assistant corporate medical director in
[11] 1974?

[12] A: Correct.

[13] Q: And held that position for three years
[14] before becoming medical director for Du Pont,
[15] correct?

[16] A: That's correct.

[17] Q: How did your responsibilities change when
[18] you became assistant corporate medical director in
[19] 1974?

[20] A: My job then was to assist the corporate
[21] medical director in making sure that we had the
[22] proper occupational medical programs in place
[23] throughout the company worldwide and we had in place
[24] the proper people to carry them out and if they were
[25] in fact being carried out.

1—00:48:53 25—00:49:55

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[1] Q: And then when you became the medical
[2] director in 1977, were you then the person who was
[3] responsible for making those types of decisions?

[4] A: Yes.

[5] Q: And then you held that position I think
[6] you said until 1983; is that correct?

[7] A: That's correct.

[8] Q: And then what happened with respect to
[9] your employment in 1983?

[10] A: At that time the director of safety and
[11] fire protection retired and it was decided to combine
[12] the medical and the safety and fire protection
[13] functions together since we used the same resources
[14] except for just a little different training so they
[15] were combined into what was called the medical,
[16] safety, and fire protection group and I was made the
[17] general director of that group.

[18] Q: The medical, safety, and fire protection
[19] group?

[20] A: Yes.

[21] Q: And your formal title was? I'm sorry.

[22] A: General director, medical, safety, and
[23] fire protection.

[24] Q: And during the time that you were
[25] assistant medical director is it safe to assume you

1—00:50:01 25—00:50:56

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[1] were in Wilmington, Delaware?

[2] A: Yes.

[3] Q: And also during the time that you were the
[4] corporate medical director?

[5] A: Yes.

[6] Q: And when you acquired this new title as
[7] general director for the position you just described,
[8] you also were in Wilmington, Delaware?

[9] A: Yes.

[10] Q: How long did you hold that position?

[11] A: One year.

[12] Q: So from 1983 to 1984?

[13] A: Yes, from April of '83 until June of '84.

[14] Q: And then what happened with respect to
[15] your employment at that time, June of '84?

[16] A: I was made a vice president of the company
[17] and the environmental activity was also integrated
[18] into the other functions I already had, the medical
[19] and the safety and the fire protection, and I became
[20] vice president with responsibility for safety,
[21] health, and environmental affairs.

[22] Q: Vice president, safety, health, and
[23] environmental affairs?

[24] A: Yes.

[25] Q: What environmental affairs

1—00:51:04 25—00:52:14

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[1] responsibilities did you take on at that point?
[2] A: My job was to make sure that we had the
[3] proper environmental policies in place around our
[4] facilities and then to make sure that we had the
[5] appropriate people and enough people to carry out
[6] those policies and then to make sure that the
[7] policies were in fact being carried out.

[8] Q: Who was performing that function prior to
[9] the time that you took it over?

[10] A: That was a newly created job. There had
[11] been a person who had the director of environmental
[12] affairs title but not director of safety, health, and
[13] environmental affairs.

[14] I had safety and health in my
[15] responsibility. The other person had environmental
[16] affairs, and then I just picked up that organization
[17] within my organization.

[18] Q: Who had been responsible for environmental
[19] affairs prior to that?

[20] A: A fellow named Robert Bonczek.

[21] Q: How is Bonczek spelled?

[22] A: B-o-n-c-z-e-k.

[23] Q: Do you know why the environmental affairs
[24] responsibilities were moved from him to you?

[25] A: Primarily because again we were using the

1—00:52:16 25—00:53:26

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[1] same resources, borrowing from each other. He and I
[2] worked extremely close together. It was decided to
[3] make that job a vice president's level job and to
[4] combine all those activities because we used the same
[5] resources and we dealt with the same regulatory
[6] agencies and everything anyway and it was decided to
[7] make that into a vice president of the corporation
[8] job and the job could have been given to him just as
[9] well as given to me but for whatever reason they
[10] chose to give it to me.

[11] Q: What happened to Mr. Bonczek —

[12] A: Bonczek.

[13] Q: — after that?

[14] A: He was reassigned to another job. He
[15] stayed with the company. And I can't remember what
[16] his job responsibilities were.

[17] Q: Was it at a similar pay level?

[18] A: Yeah, the same pay level. He was a
[19] director level.

[20] Q: How long did you hold the position of vice
[21] president, safety, health, and environmental affairs
[22] for Du Pont?

[23] A: From June of 1984 until March of 1993.

[24] Q: And then what happened with respect to
[25] your employment in March of '93?

1—00:53:27 25—00:54:35

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[1] A: I was still employed by Du Pont but it was
[2] decided that we needed to change our health insurance
[3] plan because of the skyrocketing cost of health
[4] insurance and to make sure that we didn't
[5] deliberalize the benefit, that we maintain the
[6] benefits for the employees and family but at the same
[7] time we had a better system to maintain and control
[8] those costs.

[9] Because of my background experience and
[10] some other things that I had done some work for with
[11] the State of Delaware and with the U.S. government I
[12] was asked to take that responsibility and do that.
[13] So I was assigned the job then as vice president but
[14] responsibility for integrated health care.

[15] Q: So your new title was what now?

[16] A: Vice president, integrated health care.

[17] Q: Was that a position that existed prior to
[18] the time you took on those responsibilities?

[19] A: No.

[20] Q: So it was a new position created in March
[21] of '93 at Du Pont?

[22] A: Yes.

[23] Q: And did that position encompass everything
[24] that you had been doing as vice president, safety,
[25] health, and environmental affairs plus something

1—00:54:37 25—00:55:43

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[1] else?

[2] A: No. The safety and environmental affairs
[3] activity moved over to someone else and the
[4] industrial hygiene activity moved over to that person
[5] and I picked up responsibility still — I kept the
[6] responsibility for the medical function as well as
[7] picking up the responsibility for all of the benefits
[8] function.

[9] Q: So when you became vice president,
[10] integrated health care, you retained responsibility
[11] only for the medical function but you then took on
[12] some of the health insurance?

[13] A: All the benefits.

[14] Q: Benefits?

[15] A: Which included health insurance.

[16] Q: Who at that point then became responsible
[17] for safety and environmental affairs?

[18] A: A fellow named Paul Tebo, T-e-b-o.

[19] Q: And was that still a vice president
[20] position?

[21] A: Yes.

[22] Q: So there was a new position created, a
[23] vice president, safety and environmental affairs?

[24] A: Well, they left the same title, safety,
[25] health, and environmental affairs because they kept

1—00:55:46 25—00:57:19

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[1] the industrial hygiene so it was still the same title
[2] and it was not a new position but the new person was
[3] in a position that was created — that I went into
[4] was a new position.

[5] Q: During the time that you were medical
[6] director for Du Pont between 1977 and 1983 were you
[7] the top person at Du Pont, so to speak, for making
[8] medical decisions?

[9] A: I was considered the top corporate medical
[10] person within the company as far as decisions or
[11] policies or what else was concerned.

[12] Q: And when you became vice president,
[13] safety, health, and environmental affairs in 1984,
[14] were you still the top person at Du Pont for medical
[15] decisions?

[16] A: Yes.

[17] Q: What about when you became vice president,
[18] integrated health care, were you still the top person
[19] at Du Pont for making medical decisions?

[20] A: Yes.

[21] Q: And you maintained that position from
[22] March of 1993 until when?

[23] A: Until I retired in March 31st of 1996.

[24] Q: When you retired in 1996, who took over
[25] your position as vice president of integrated health

1—00:57:24 25—00:58:39

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[1] care?

[2] A: A lady named Joan Gardner, G-a-r-d-n-e-r I
[3] believe. I don't think it has an "I" in it.

[4] Q: And is she still the — does she still
[5] hold that position?

[6] A: No. She's retired.

[7] Q: When did she retire?

[8] A: I don't know.

[9] Q: When she took over the position in 1996,
[10] did she become the top person at Du Pont for making
[11] medical decisions?

[12] A: She was not a physician. The chief
[13] medical person then became a physician named Dick
[14] Wilder and he reported to her, and how they chose to
[15] align that responsibility, he would be the chief
[16] medical person but whether or not she or he made the
[17] medical decisions I don't know but he would be the
[18] chief medical person.

[19] Q: Do you know what his title was?

[20] A: I think he was chief medical officer. I
[21] believe that's what the title was. I had nothing to
[22] do with it because I had already gone.

[23] Q: Was chief medical officer a new position
[24] that was created in 1996?

[25] A: A new title. It wouldn't have been a new

1—00:58:41 25—00:59:59

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[1] position as such. It would have been a new title.

[2] Q: A new title to take the medical functions
[3] specifically?

[4] A: It would have been the same job as the
[5] previous title of corporate medical director that I
[6] held that just would have been retitled as chief
[7] medical officer.

[8] Q: So there was a corporate medical director
[9] up until 1983 and then a chief medical officer
[10] beginning in 1996.

[11] Was there any specific medical position
[12] other than the ones you've described that you held
[13] between 1983 and 1996?

[14] A: There was a corporate medical director
[15] from 1983 until 1990, and then in 1990 I eliminated
[16] that job of corporate medical director and had two
[17] assistant corporate medical directors because my job
[18] was still functioning as a chief medical officer even
[19] when the other person had the title of corporate
[20] medical director and so there was no need to keep
[21] that job in there. So I eliminated that job but I
[22] had two assistant corporate medical directors who
[23] reported to me.

[24] Q: Okay. Who was the corporate medical
[25] director between '83 and '90?

1—01:00:01 25—01:01:25

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[1] A: From '83 until about '86 or '87 would have
[2] been Burford Culpepper. And then from '86 or '87
[3] until 1990 was Robert Ligo, L-i-g-o.

[4] Q: And although those two individuals held
[5] the position of chief medical officer consecutively,
[6] they nevertheless were second in command, so to
[7] speak, behind you on medical decisions during that
[8] period of time?

[9] A: They didn't have the title of chief
[10] medical officer. They had the title of corporate
[11] medical director.

[12] Q: I'm sorry, corporate medical director.

[13] A: But you're correct in that I was still
[14] looked at as the chief medical officer and they
[15] reported to me.

[16] Q: And then in 1990 you eliminated that title
[17] of corporate medical director and did Mr. Ligo become
[18] one of the two assistants?

[19] A: No. He retired.

[20] Q: Who became the assistants at that point?

[21] A: There were already two assistant medical
[22] directors under Dr. Ligo and one of them was
[23] Dr. Benjamin Ramirez and the other one was Dr. Ray
[24] Strocko, S-t-r-o-c-k-o.

[25] Q: Do you know how long Mr. Ramirez remained

1—01:01:39 25—01:02:59

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[1] one of the assistant medical directors?

[2] A: Dr. Ramirez retired — or left the company
[3] perhaps 1997, 1998.

[4] Q: Do you know if he was replaced by anybody
[5] at that particular time?

[6] A: I don't know.

[7] Q: What about with respect to Dr. is it
[8] Strocko?

[9] A: Strocko. Dr. Strocko is still with the
[10] company and still in the same position as far as I
[11] know.

[12] Q: Sorry to keep jumping around here but
[13] going back to the point in time you first became the,
[14] let me make sure I get the title right, the corporate
[15] medical director in 1977, did you have assistants at
[16] that time.

[17] A: Yes.

[18] Q: Who were your assistants in 1977?

[19] A: I had one assistant, Dr. John Bonnett,
[20] B-o-n-n-e-t-t, and that was for a few months, and
[21] then because I was sent to Europe for a month,
[22] another assistant medical director was appointed,
[23] Dr. Vann Brewster, had two assistant medical
[24] directors then.

[25] Q: This was still in '77?

1—01:03:01 25—01:04:11

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[1] A: Yes.

[2] Q: How long did Dr. Vann Brewster remain your
[3] assistant?

[4] A: For about two years and then he resigned
[5] from the company for other employment.

[6] Q: In around 1979?

[7] A: '78, '79, something in that time frame.

[8] Q: Do you know why he resigned?

[9] A: No, I don't.

[10] Q: Had you had any concerns with his work
[11] during the time that he worked with you?

[12] A: No.

[13] Q: Who, if anyone, took over as assistant at
[14] that time?

[15] A: We didn't have an assistant medical
[16] director other than Dr. Bonnett for some period of
[17] time in there and then Dr. Culpepper came in as
[18] assistant medical director I don't remember exactly
[19] when.

[20] Q: I think you had mentioned in '83?

[21] A: That's when he became corporate medical
[22] director. He became assistant medical director prior
[23] to that.

[24] Q: Other than Dr. Bonnett, Vann Brewster, and
[25] Culpepper, was anybody else holding the position of

1—01:04:16 25—01:06:58

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[1] assistant medical director prior to 1990?

[2] A: When Dr. Culpepper became medical
[3] director, then Dr. Ligo became assistant medical
[4] director.

[5] Q: You retired on March 31st of 1996; is that
[6] right?

[7] A: That's correct.

[8] Q: And at that point you were vice president,
[9] integrated health care, for Du Pont; is that correct?

[10] A: That's correct.

[11] Q: What, if anything, did you do for
[12] employment after that point?

[13] A: Nothing.

[14] Q: Was there a point in time when you held
[15] some position with an entity known as Du Pont Merck?

[16] A: No.

[17] (Plaintiffs' Exhibit 1 was marked
[18] for identification.)

[19] Q: (By Mr. Bilott) Dr. Karrh, I'm handing
[20] you what's been marked as Exhibit 1 to your
[21] deposition and ask you to take a moment to look at
[22] that and tell me if you can identify what it is.

[23] A: This is a letter to the editors from the
[24] Delaware Medical Journal, May of 1995, Volume 67,
[25] Number 5, titled Du Pont Merck Offers Clarification

1—01:07:02 25—01:07:57

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[1] of March President's Page.

[2] Q: Is that a document you authored?

[3] A: I authored the letter. I did not write
[4] the title.

[5] Q: You'll see that the letter references your
[6] name and there's a title vice president, human
[7] resources, Du Pont Merck. Do you see that?

[8] A: Yes.

[9] Q: Do you have an understanding as to why
[10] that title is referenced there?

[11] A: It was an error in the publication.

[12] Q: So as of May of 1995 what was your actual
[13] title?

[14] A: I was vice president, integrated health
[15] care, of the Du Pont company.

[16] Q: Are you aware of any reason why there
[17] would be a reference to Merck in this particular
[18] document?

[19] A: Because the Delaware Medical Journal is
[20] not the most sophisticated medical journal in the
[21] world.

[22] Q: Okay.

[23] A: And they jumped to the conclusion even
[24] though it was on Du Pont company letterhead, not
[25] Du Pont Merck, and I had no control over this. I

1—01:08:06 25—01:18:50

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[1] wrote them a correction but that never got published.

[2] Q: After leaving Du Pont in 1996 did you take
[3] any employment with anyone else since that time?

[4] A: No.

[5] Q: Have you been paid to provide medical
[6] services by anyone since leaving Du Pont?

[7] A: No.

[8] Q: Now, with the exception of I believe you
[9] mentioned you are paid for testimony by Du Pont?

[10] MR. GREEN: I object to the form of the
[11] question.

[12] THE WITNESS: I am paid for consulting
[13] with Du Pont. If it involved testimony, then
[14] I'd be paid for that. If it involved something
[15] else, then I'd be paid for that.

[16] Q: (By Mr. Bilott) With that exception
[17] though, have you received payment from anyone other
[18] than Du Pont since you left Du Pont in 1996?

[19] A: No.

[20] MR. GREEN: Why don't we take five minutes
[21] now.

[22] (A recess was taken)

[23] Q: (By Mr. Bilott) Dr. Karrh, we're back
[24] from a short break. Do you sit on any boards of any
[25] kind?

1—01:18:50 25—01:20:09

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[1] A: At the present time, no.

[2] Q: Have you in the past?

[3] A: Yes.

[4] Q: Which ones?

[5] A: I've never sat on an industry board but I
[6] was on the board of several organizations, many
[7] different organizations over the years dealing in the
[8] safety, health, environmental areas.

[9] Q: How many?

[10] A: Well, I can name them all.

[11] Q: Okay.

[12] A: The Organization of Resources Counselors
[13] out of Washington, DC, the American Industrial Health
[14] Council which I was also chairman of the board
[15] subsequently of, the Chemical Industry Institute of
[16] Toxicology which I also became chairman of, the —
[17] complete block on the name right now, the Thomas
[18] Jefferson University Board of Trustees in
[19] Philadelphia, the organization that EPA and industry
[20] put together in Philadelphia to address industrial
[21] and environmental issues and I'm trying to think of
[22] the name of that one.

[23] Q: That was the U.S. EPA?

[24] A: Yes.

[25] Q: Was it Children's Health?

1—01:20:12 25—01:21:41

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[1] A: I was on — that's a different thing.

[2] Q: Okay.

[3] A: But this board, this was an organization
[4] that was put together as an entity between industry
[5] and EPA and I was on that board and I can't remember
[6] the name of it now, anyway. Then the National
[7] Wildlife Federation's corporate conservation council
[8] board.

[9] Q: National Wildlife?

[10] A: National Wildlife Federation corporate
[11] conservation council board, American Heart
[12] Association, Delaware chapter, board. There may be
[13] others. Those are the ones I can remember right now.

[14] Q: You don't sit on any of those at the
[15] present time right now?

[16] A: No, I don't. One other one was the
[17] Jefferson Health System Board which was the Thomas
[18] Jefferson University Hospital main line health
[19] hospital out of Philadelphia, that board, I sat on
[20] it. I did. I don't now.

[21] Q: I want to go back to the conversations you
[22] had with John Bowman prior to the time that he called
[23] you about the specific deposition in this case.

[24] I believe you mentioned that there were at
[25] least a couple of conversations with Mr. Bowman prior

1—01:21:45 25—01:22:47

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[1] to that telephone call, correct?

[2] A: Now, over the years I've had many, many
[3] conversations with Mr. Bowman about a variety of
[4] different subjects.

[5] Q: Let me clarify this. We're talking about
[6] the period of time after you left Du Pont, between
[7] then in '96, and the time that Mr. Bowman called you
[8] about setting up the deposition in this case. There
[9] were conversations with Mr. Bowman during that period
[10] of time?

[11] A: Yes, but on more issues than just this
[12] one.

[13] Q: Right. Now, with respect to this issue,
[14] C-8, West Virginia, how many conversations do you
[15] recall?

[16] A: Perhaps three, maybe three.

[17] Q: And were these by telephone or in person
[18] or otherwise?

[19] A: They were mostly by telephone. There were
[20] two that I recall in person.

[21] Q: What do you recall with respect to the
[22] first in-person meeting with Mr. Bowman on C-8?

[23] A: This was —

[24] MR. GREEN: Just a minute. You have not
[25] established when the attorney-client

1—01:22:49 25—01:23:49

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[1] relationship developed and I will instruct you,
[2] Dr. Karrh, not to disclose any communications
[3] with Mr. Bowman or any counsel that arose at
[4] such time that you were represented with respect
[5] to this matter.

[6] THE WITNESS: Okay.

[7] Q: (By Mr. Bilott) Dr. Karrh, I believe you
[8] mentioned at the time that Mr. Bowman called and
[9] asked you about the deposition you had not as of that
[10] point asked him to represent you in this case
[11] correct? Correct?

[12] MR. GREEN: I object to the form of the
[13] question because I don't think it characterizes
[14] his testimony correctly.

[15] MR. BILOTT: Object to the form. I
[16] understand.

[17] THE WITNESS: Mr. Bowman and I have had a
[18] longstanding what you might call attorney-client
[19] association because he and I have worked
[20] together for many, many years on a variety of
[21] different issues and I have always looked at him
[22] as my counsel as well as Du Pont's counsel.

[23] Q: (By Mr. Bilott) When did you specifically
[24] ask Mr. Bowman to represent you in connection with
[25] anything to do with C-8?

1—01:23:50 25—01:24:57

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[1] A: When he first contacted me about any type
[2] of litigation with C-8.

[3] Q: When was that?

[4] A: That was probably three years ago. I was
[5] trying to recall earlier but it was probably about
[6] three years ago.

[7] Q: Why would you ask for representation three
[8] years ago?

[9] A: Because Mr. Bowman asked me to meet with
[10] him about C-8 and at that time we discussed
[11] representation because he had represented me in the
[12] past on other issues.

[13] Q: And did you specifically request that he
[14] represent you?

[15] A: It has always been understood that Du Pont
[16] counsel would represent me. I don't remember saying,
[17] John, are you going to represent me on this like you
[18] always have in the past, but it was always understood
[19] that Du Pont counsel would represent me.

[20] Q: Did you actually make a request that
[21] Du Pont counsel represent you with respect to C-8 at
[22] that time?

[23] A: Not at that point in time that I recall.

[24] Q: What was discussed with Mr. Bowman then at
[25] that point in time that with respect to C-8?

1—01:24:59 25—01:25:52

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[1] MR. GREEN: Again I'll object and instruct
[2] him not to answer because he's testified that
[3] the attorney-client relationship developed at
[4] that time.

[5] MR. BILOTT: We don't need — you can
[6] object and instruct him not to answer. I don't
[7] think that's what the testimony was.

[8] Q: (By Mr. Bilott) You just mentioned that
[9] at that point you did not specifically ask for
[10] representation on this specific issue; is that
[11] correct?

[12] A: I did not specifically ask for
[13] representation on this specific issue but Mr. Bowman
[14] and I had had a longstanding relationship where he
[15] had represented me on many other issues before and
[16] that issue was ongoing because I was meeting with him
[17] at his request as a Du Pont representative and me as
[18] a former Du Pont representative, so that relationship
[19] continued through that discussion.

[20] Q: But there was nothing actually said
[21] specifically about retaining Du Pont counsel at that
[22] point?

[23] A: I don't recall asking him are you going to
[24] be my lawyer, no.

[25] Q: If that first — was this an in-person

1—01:25:58 25—01:26:51

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[1] meeting, this first situation you're referring to
[2] now?

[3] A: Yes.

[4] Q: Where was it?

[5] A: In Charleston, West Virginia.

[6] Q: During what time period?

[7] A: As I said, about three years ago. I can't
[8] tell you when.

[9] Q: And why were you in Charleston, West
[10] Virginia, at that point in time?

[11] A: Mr. Bowman asked me to come to Charleston
[12] to meet with him and outside counsel in Charleston.

[13] Q: Who was the outside counsel?

[14] A: I don't recall.

[15] Q: Do you know where you met, where in
[16] Charleston?

[17] A: In downtown Charleston.

[18] Q: Were you asked to bring any documents or
[19] anything of any kind to the meeting?

[20] A: No.

[21] Q: Were you shown any documents of any kind?

[22] A: I don't recall whether I was or not. The
[23] meeting lasted about half a day and I don't recall.

[24] Q: How many people were in the meeting?

[25] A: Three or four.

1—01:26:53 25—01:27:57

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[1] Q: Do you recall being asked to sign anything
[2] at the end of that meeting?
[3] A: No.
[4] Q: Or as a follow-up to that meeting?
[5] A: No.
[6] Q: Do you recall ever being asked by — and I
[7] apologize if we asked this before, but do you recall
[8] anyone ever asking you to look for documents relating
[9] to C-8 or the litigation?
[10] A: I was not asked specifically to look for
[11] documents. I was asked did I have documents, and
[12] since I knew I did not have any I didn't look for
[13] any.
[14] Q: And that would include you're confident
[15] there's nothing on your in-home computer?
[16] A: That's correct, there's nothing on it that
[17] would deal with that.
[18] Q: So the first meeting you say lasted about
[19] half a day?
[20] A: Approximately.
[21] Q: When was the second meeting?
[22] A: The second meeting would have been
[23] probably in November of last year.
[24] Q: I'm sorry. Let's go back to that first
[25] meeting. The time that you spent going to Charleston

1—01:28:00 25—01:28:50

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[1] and meeting with the Du Pont counsel, did you send a
[2] bill to anybody at Du Pont for that meeting?
[3] A: I sent a bill to Mr. Bowman for my
[4] expenses and for the time that was spent in the
[5] meeting.
[6] Q: Do you recall what the amount was?
[7] A: No, I don't.
[8] Q: The second meeting which was, I'm sorry,
[9] sometime —
[10] A: Sometime in the latter part of last year,
[11] October, November time frame.
[12] Q: And who requested that particular meeting?
[13] A: Mr. Bowman.
[14] Q: Was this in a phone call to you, asking
[15] you to come to a meeting?
[16] A: It was a phone call to me, asking me to
[17] meet with him but he would come to Savannah.
[18] Q: And did he in fact come to Savannah?
[19] A: Yes.
[20] Q: And did you meet with Mr. Bowman in
[21] Savannah?
[22] A: Yes.
[23] Q: Was anybody else present during that
[24] meeting?
[25] A: Yes.

1—01:28:50 25—01:29:37

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[1] Q: Who?
[2] A: Mr. Green.
[3] Q: Mr. Doug Green who's here today?
[4] A: Yes.
[5] Q: Anyone else?
[6] A: No.
[7] Q: How long did that meeting last?
[8] A: Perhaps a half a day.
[9] Q: And again were you shown any documents of
[10] any kind during that meeting?
[11] A: Yes.
[12] Q: What were you shown?
[13] MR. GREEN: I'm going to object and
[14] instruct him not to answer because it invades
[15] the work product privilege.
[16] Q: (By Mr. Bilott) How many documents were
[17] you shown?
[18] A: I don't recall a number. I was shown
[19] several documents and asked to comment on them.
[20] Q: More than a dozen documents?
[21] A: I don't recall.
[22] Q: Did you recognize any of the documents
[23] that you were being shown?
[24] A: Yes.
[25] Q: Were these documents you had authored?

1—01:29:39 25—01:30:44

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[1] A: Some of them.
[2] Q: Again did you create any notes of any kind
[3] during that meeting?
[4] A: No.
[5] Q: Did you bring anything with you to that
[6] meeting?
[7] A: I usually carry my little notebook that I
[8] write down where I'm supposed to be and what time.
[9] That's what that is on here as far as today is
[10] concerned, but I did not take anything else with me
[11] and I did not take anything away with me.
[12] Q: And what was said during that meeting?
[13] MR. GREEN: Object and instruct you not to
[14] answer that question.
[15] Q: (By Mr. Bilott) Do you recall any other
[16] meetings with respect to C-8 or this litigation other
[17] than those two you just mentioned?
[18] A: I met yesterday with Mr. Green.
[19] Q: Again that's Doug Green who's in the room
[20] today?
[21] A: Yes, it is.
[22] Q: How long did that meeting last?
[23] A: About half a day.
[24] Q: Anybody else present during the meeting?
[25] A: No.

1—01:30:44 25—01:31:32

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[1] Q: Were you shown any documents during that
[2] meeting?

[3] A: Yes.

[4] Q: How many?

[5] MR. GREEN: Again I'll object and instruct
[6] him not to answer any questions about specific
[7] questions about preparation for the deposition
[8] on the grounds that it invades the work product
[9] privilege.

[10] - MR. BILOTT: I disagree. But you're
[11] instructing the witness not to tell me how many
[12] documents he looked at?

[13] MR. GREEN: I think that invades the work
[14] product privilege.

[15] MR. BILOTT: So you're going to instruct
[16] him not to answer that?

[17] MR. GREEN: Yes.

[18] Q: (By Mr. Bilott) Did you generate or
[19] create any documents during that meeting?

[20] A: No.

[21] Q: Were you asked to sign anything?

[22] A: No.

[23] Q: Did you recognize any of the documents you
[24] were shown?

[25] A: Yes.

1—01:31:34 25—01:32:41

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[1] Q: Would these include documents you had
[2] authored?

[3] A: Some of them.

[4] Q: And you spent about a half a day yesterday
[5] again?

[6] A: Yes.

[7] Q: Other than these three meetings you've
[8] just described, have you had any conversations with
[9] any lawyer for Du Pont about C-8 or litigation in
[10] West Virginia since the time you left Du Pont in '96?

[11] A: I don't recall having any. I don't
[12] recall.

[13] Q: You mentioned that you sometimes take a
[14] notebook with you?

[15] A: Yes.

[16] Q: Do you have any notes from any of the
[17] prior meetings?

[18] A: No.

[19] Q: Other than meetings, do you recall any
[20] telephone conversations with any lawyers for Du Pont
[21] other than the one you mentioned to me earlier today
[22] when Mr. Bowman called to ask you about setting up a
[23] deposition?

[24] A: I don't recall having had any other
[25] telephone calls regarding C-8 from any attorneys with

1—01:32:45 25—01:33:58

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[1] Du Pont.

[2] Q: Other than meeting with Du Pont counsel,
[3] what, if anything, did you do to prepare for your
[4] deposition today?

[5] A: Nothing.

[6] Q: Did you talk with anyone other than
[7] Du Pont's counsel about preparing for the deposition?

[8] A: Yeah. I told my wife I was going to bed
[9] early so I could get a good night's sleep.

[10] Q: Anyone other than that?

[11] A: No.

[12] Q: Did you call anybody at Du Pont or any
[13] former employee of Du Pont to discuss anything about
[14] C-8 or anything about this case?

[15] A: No.

[16] Q: In the more than 50 depositions that
[17] you've given did any of those involve C-8?

[18] A: No.

[19] Q: Did any of those involve any chemical used
[20] by Du Pont that in your experience with the company
[21] you would consider a persistent chemical?

[22] A: I would have to ask you to explain what
[23] you mean by persistent.

[24] Q: Have you ever used the term persistent
[25] with respect to a chemical used by Du Pont?

1—01:34:00 25—01:35:12

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[1] A: I don't — I'd have to know the context in
[2] which you think I may have used that. I don't know
[3] what you mean by persistent in this case.

[4] Q: Have you ever heard the term
[5] biopersistent?

[6] A: Yes.

[7] Q: Let me ask it that way. Have you ever
[8] participated in any deposition in which any issues
[9] were being raised with respect to the biopersistence
[10] of any chemical used by Du Pont?

[11] A: Yes.

[12] Q: How many depositions?

[13] A: Perhaps four or five.

[14] Q: Do you recall which chemicals those were?

[15] A: Lead would be one. Dimethyl acetamide
[16] would be one.

[17] Q: Is that DMA?

[18] A: Yes, DMAC. Dimethyl formic (phonetic),
[19] which is DMF.

[20] Q: Any others?

[21] A: I don't recall others.

[22] Q: Was there litigation with respect to DMC?

[23] A: DMAC.

[24] Q: DMAC, I'm sorry, that had been filed?

[25] A: No.

1—01:35:12 25—01:36:26

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- [1] Q: Why were you giving a deposition then on
[2] DMAC?
[3] A: I may have misunderstood your question
[4] because I did not think you put it in the context of
[5] a deposition. Was that what — the question was put
[6] in the context of a deposition on it?
[7] Q: Yes. I'm sorry.
[8] A: I'm sorry. I thought you said discussions
[9] with lawyers on it. So I may have answered your
[10] question erroneously then.
[11] Q: That's okay. Let's go back and clarify
[12] that. Do you recall ever giving testimony in a
[13] deposition about any chemical handled by Du Pont that
[14] is viewed as biopersistent?
[15] A: No.
[16] Q: Now, these three situations you mentioned
[17] involving lead, DMAC, and DMF, in what context were
[18] you providing any discussions on those three?
[19] A: Those were chemicals which I had a good
[20] bit of involvement while I was working and had many
[21] discussions with a variety of people including
[22] congressional testimony and other places on these
[23] materials and the fact that they did biopersist. I
[24] don't recall specifically with whom it was discussed.
[25] Q: I think you mentioned — let me go back

1—01:37:44 25—01:38:39

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- [1] for a second to the meetings that you had with
[2] Du Pont counsel about C-8 prior to your deposition
[3] today.
[4] I think you mentioned the first meeting
[5] you did send a bill to Du Pont for your time; is that
[6] correct?
[7] A: Yes.
[8] Q: Did you do the same thing with respect to
[9] the second meeting?
[10] A: Yes.
[11] Q: And do you plan to do so with respect to
[12] the meeting yesterday?
[13] A: Yes.
[14] Q: And for the deposition today?
[15] A: Yes.
[16] Q: Have you ever authored any articles?
[17] A: Yes.
[18] Q: You know how many?
[19] A: About 15 or 16.
[20] Q: Do you recall whether — have you authored
[21] any articles dealing specifically with perfluorinated
[22] chemicals?
[23] A: I don't recall having authored one that
[24] dealt specifically with perfluorinated chemicals.
[25] Q: I think you mentioned that you did provide

1—01:38:49 25—01:40:24

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- [1] testimony before the U.S. Congress in the past; is
[2] that correct?
[3] A: Yes.
[4] MR. BILOTT: Mark that.
[5] (Plaintiffs' Exhibit 2 was marked
[6] for identification.)
[7] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[8] hand you what's been marked as Exhibit 2 in your
[9] deposition and ask you to take a moment to look at
[10] that and tell me if you can identify what it is.
[11] I will represent to you that it is
[12] excerpts from the complete document which is several
[13] hundred pages long.
[14] A: It's entitled Genetic Screening and the
[15] Handling of High-Risk Groups in the Workplace,
[16] Hearings Before the Subcommittee on Investigations
[17] and Oversight, Committee on Science and Technology,
[18] U.S. House of Representatives, Ninety-Seventh
[19] Congress, First Session, October 14, 15, 1981.
[20] Q: And you in fact appeared before this
[21] particular subcommittee on investigations and
[22] oversight chaired by Albert Gore, Jr., on October —
[23] in October of 1981, correct?
[24] A: That's correct.
[25] Q: And at that point you were employed by

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- [1] Du Pont, correct?
[2] A: That's correct.
[3] Q: Do you remember what the purpose of this
[4] particular hearing was?
[5] A: Congressman Gore was looking at the issue
[6] of genetic screening and the handling of high risk
[7] groups in the workplace.
[8] He knew that I had had involvement in that
[9] and that I had written an article on genetic
[10] screening and had had some newspaper quotes on it.
[11] He sent me a letter, asking me to testify
[12] before the subcommittee and told me what he would
[13] like for me to testify on and set the date and
[14] everything and I appeared.
[15] Q: In fact, there is a reference to Chairman
[16] Gore having sent you a letter that you were
[17] responding to, correct?
[18] A: That's correct.
[19] Q: Do you have a copy of that letter?
[20] A: No.
[21] Q: What did the letter say?
[22] A: This was 1981.
[23] Q: Just general subject matter. What was the
[24] point of the letter?
[25] A: It was about a three-page letter telling

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[1] me what he would like for me to testify on before his
[2] subcommittee and we went about an hour and a half
[3] before he ever got to the content of the three-page
[4] letter but he explored a lot of other subjects that I
[5] knew more about than I knew about the three-page
[6] letter.

[7] Q: And you in fact agreed to appear on behalf
[8] of Du Pont and provide testimony on certain topics,
[9] correct?

[10] A: That's correct.

[11] Q: And you appeared with legal counsel
[12] Mr. Hapka; is that right?

[13] A: Right.

[14] Q: So you had the approval of Du Pont to go
[15] and make this presentation?

[16] A: That's correct.

[17] Q: If I could refer you to the prepared
[18] statement that you submitted which begins on Page
[19] 264, do you see that?

[20] A: I see that.

[21] Q: Now, the heading here says prepared
[22] statement of B.W. Karrh. That is referring to the
[23] written document that you submitted to this
[24] particular congressional subcommittee, correct?

[25] A: That's correct.

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[1] Q: And this is a transcription of the letter
[2] you sent them?

[3] A: Yes.

[4] Q: In the first paragraph there's a summary
[5] of your work history, which we went over in general
[6] terms this morning; do you see that?

[7] A: Yes.

[8] Q: Toward the bottom of the first paragraph
[9] there's a statement, "as corporate medical director I
[10] am administrator of the Du Pont company's
[11] occupational medical program and am responsible for
[12] developing and assisting in implementing corporate
[13] policy related to employee health matters." Do you
[14] see that?

[15] A: Yes.

[16] Q: And that was — did you maintain that
[17] responsibility for developing and assisting in
[18] implementing corporate policy related to employee
[19] health matters after 1981?

[20] A: Yes.

[21] Q: How long did you keep that responsibility?

[22] A: Until I retired in 1996.

[23] Q: Two paragraphs down you make the
[24] statement, quote, "it is Du Pont company policy to
[25] provide a safe and healthful workplace for its

1—01:43:51 25—01:45:06

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[1] employees," close quote. Do you see that?

[2] A: Yes.

[3] Q: And are you aware of any change to that
[4] policy during any period in which you were employed
[5] by Du Pont?

[6] A: No.

[7] Q: That remained the policy until you retired
[8] at least?

[9] A: Yes.

[10] Q: Do you know whether there's been any
[11] change to that policy since you left?

[12] A: Not to my knowledge.

[13] Q: And you describe in this particular
[14] written submission that the program that Du Pont has
[15] in place to assist in implementing this policy
[16] through toxicology, industrial hygiene, occupational
[17] medicine, and epidemiology work, correct?

[18] A: Yes.

[19] Q: And did that particular approach to
[20] implementing the Du Pont policy change at any point
[21] in time after 1981?

[22] A: No.

[23] Q: On Page 267 in the third full paragraph
[24] that begins "an employer," do you see that?

[25] A: Yes.

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[1] Q: You testified that, quote, "an employer in
[2] our opinion cannot shirk its responsibility to
[3] provide a safe and healthful workplace by
[4] transferring this obligation to the worker.
[5] Du Pont's practice is not to permit workers to assume
[6] the risks of bodily harm from known or predictable
[7] hazards of occupational disease or accident. This —
[8] and I assume there may be a typo there, that "is"
[9] maybe is missing. The case regardless of any
[10] potential financial loss incurred by the company or
[11] the employees," close quote, and it goes on. Do you
[12] see that?

[13] A: Yes.

[14] Q: That was in fact Du Pont's position at
[15] that time?

[16] A: Yes.

[17] Q: Are you aware of any change in the
[18] position of Du Pont since that time?

[19] A: No, I'm not.

[20] Q: There's then a statement, quote, "if we
[21] cannot manufacture a product without creating undue
[22] risks to our employees, we will not manufacture it at
[23] all. We will not knowingly allow our employees to
[24] work at increased risk of adverse health effects due
[25] to their jobs," close quote. Do you see that?

1—01:46:10 25—01:47:11

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[1] A: Yes.

[2] Q: Would this policy apply also to the
[3] neighbors in the communities surrounding the Du Pont
[4] plants that could be exposed to the same chemicals
[5] coming out of these particular Du Pont facilities?

[6] MR. GREEN: Object to the form of the
[7] question.

[8] Q: (By Mr. Bilott) You understand?

[9] A: Yes, I understand. The company policy
[10] was, as stated, if we cannot manufacture a product
[11] without creating undue risk to our employees we will
[12] not manufacture it at all.

[13] That same applied to the communities
[14] surrounding us, surrounding the plant, and we knew
[15] though that by — because of the plant operations,
[16] that the employees within the plant would have a
[17] higher potential exposure to materials because they
[18] would be working directly with them. So we
[19] concentrated our efforts on making sure that we
[20] protected the employees and then we knew that if we
[21] did that that we would be protecting the community
[22] surrounding the plant.

[23] Q: But you understood and it was Du Pont
[24] policy to protect — that the duty was to protect the
[25] neighbors as well from the risks, correct?

1—01:47:13 25—01:48:39

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[1] MR. GREEN: Object to the form of the
[2] question.

[3] Q: (By Mr. Bilott) Is that correct?

[4] A: To protect them from risk, yes.

[5] Q: If I could refer you to Page 275, this is
[6] the part of your testimony when you're actually being
[7] questioned by Mr. Gore, Chairman Gore, and your
[8] attorney makes a statement toward the bottom of Page
[9] 275 in response to a question from Chairman Gore. He
[10] says, quote, "first I want to support what Dr. Karrh
[11] has said and that is that the basis upon which we go
[12] forward with the use or the marketing of a product
[13] has as one of its cornerstones the counsel that we
[14] get from the medical department and from our Haskell
[15] Laboratory in terms of its safety. We do not balance
[16] that finally with whether or not we will be liable to
[17] a cause of action if there is any significant or even
[18] reasonable probability of harm," close quote. Do you
[19] see that?

[20] A: Yes.

[21] MR. GREEN: Hold on a second. Where is
[22] that?

[23] MR. BILOTT: Page 275. You see a
[24] reference to Mr. Hapka about three quarters of
[25] the way down?

1—01:48:40 25—01:50:00

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[1] MR. GREEN: Yes.

[2] Q: (By Mr. Bilott) Do you agree with the
[3] Du Pont's counsel statement in that regard?

[4] A: Yes.

[5] Q: So it was Du Pont's policy that in
[6] evaluating the risks of whether to continue using a
[7] particular material that it would not balance that
[8] against whether there was significant liability and
[9] make a decision based on the liability issues; is
[10] that correct?

[11] A: As strictly a liability issue, yes.

[12] Q: On Page 276 you're being asked some
[13] questions again by Chairman Gore particularly with
[14] respect to birth defect issues, which we'll come back
[15] to later, but about eight paragraphs down there's a
[16] statement where you testified, quote, "I would
[17] reiterate that although there is that legal
[18] possibility, we still feel that we have a
[19] responsibility to the employees and to society,"
[20] close quote. Do you see that?

[21] A: Yes.

[22] Q: So again you were reaffirming Du Pont's
[23] policy to — that it had a duty to protect not only
[24] its employees but also to society outside the plant
[25] from exposure to undue risks; is that correct?

1—01:50:05 25—01:51:40

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[1] A: That's correct.

[2] MR. GREEN: Object to the form.

[3] THE WITNESS: I'm sorry. That's correct.

[4] MR. BILOTT: We'll come back to this
[5] document later.

[6] Mark that one.

[7] (Plaintiffs' Exhibit 3 was marked
[8] for identification.)

[9] Q: (By Mr. Bilott) By the way, Dr. Karrh,
[10] referring back to Exhibit 2, is that one of the
[11] documents you reviewed prior to your deposition
[12] today?

[13] A: I looked at a part of this. I did not
[14] look at the whole thing. I just looked at the
[15] fact — I think I looked at the cover sheet was the
[16] only thing I saw of it.

[17] Q: Did you look at any of the specific
[18] testimony in here?

[19] A: No.

[20] Q: Dr. Karrh, I'm going to hand you what's
[21] been marked as Exhibit 3 in your deposition and ask
[22] you to take a moment to look at that and tell me if
[23] you can identify what that is.

[24] A: This is a copy of a paper that was
[25] published in the New York Academy of Sciences,

1—01:51:48 25—01:52:52

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[1] September 1978, titled A Company's Duty to Report
[2] Health Hazards. And it's authored by me and
[3] presented by me.
[4] Q: And in fact indicated in the first
[5] footnote on the first page of this document it
[6] references that this is something that was, quote,
[7] presented at a conference on ethical issues in
[8] occupational medicine, cosponsored by the New York
[9] Academy of Medicine and the National Institute For
[10] Occupational Safety and Health, back in June of 1977,
[11] correct?
[12] A: That's correct.
[13] Q: And you mention that you did author this
[14] document, correct?
[15] A: Yes, I did.
[16] Q: And there's a reference in the second
[17] footnote to reprints being directed to the Du Pont
[18] medical division, correct?
[19] A: That's correct.
[20] Q: So this was a document that was reviewed
[21] with your superiors at Du Pont and approved for
[22] publication by Du Pont?
[23] A: Yes.
[24] Q: And it accurately sets forth your position
[25] at the time, 1977?

1—01:52:54 25—01:54:07

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[1] A: That's correct.
[2] Q: At that particular time this article was
[3] published you were the Du Pont corporate medical
[4] director, correct?
[5] A: Yes.
[6] Q: And why were you publishing an article
[7] about a company's duty to report health hazards?
[8] A: I don't know if you're aware of Dr. Ervin
[9] Silacoft (phonetic) or not. He was a world renown
[10] occupational physician in the asbestos area.
[11] Dr. Silacoft was very active with the New York
[12] Academy of Medicine.
[13] Dr. Silacoft had requested based upon his
[14] knowledge of what Du Pont did as far as workplace
[15] hazard control was concerned, requested that I attend
[16] the conference and present a paper telling what
[17] Du Pont did and that was reviewed in full.
[18] Q: Who, if anyone, at Du Pont did you review
[19] this particular presentation with before it was
[20] published in '78?
[21] A: We would have a system whereby when we
[22] were going to — this was done prior to my presenting
[23] the paper. The paper was just published as a result
[24] of my presentation to the conference itself.
[25] We had a system whereby we would write up

1—01:54:10 25—01:55:30

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[1] what I thought I would say, what I thought addressed
[2] the issue that I had been asked to address, and put
[3] it as factually as I possibly could. Then I would
[4] review it with my boss. I'd review it with one of
[5] my — the environmental counsel that worked with me.
[6] It could have been Mr. Hapka who you referenced
[7] earlier. It could have been another one. And make
[8] sure that they didn't see anything that I was saying
[9] that was erroneous and was something that was not
[10] true, it was not the way we did things.
[11] And then once it went through that
[12] approval process, then I would finalize it and I
[13] would present the paper and it would be published.
[14] Q: Who was your boss at the time?
[15] A: The — that would have been Carl
[16] De Martino, who was the assistant director of
[17] employee relations.
[18] Q: Just for clarification, the corporate
[19] medical position, was it within a particular division
[20] of Du Pont or business unit of some sort?
[21] A: It was in a particular department. It was
[22] called the employee relations department.
[23] Q: And did that always remain the case?
[24] Well, let me rephrase the question. Did
[25] that medical director position always fall within

1—01:55:33 25—01:56:51

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[1] that department during the time you were there?
[2] A: Yes, except the department name was
[3] changed somewhere in the early nineties to department
[4] of human resources.
[5] Q: And Mr. De Martino was the director of
[6] that department —
[7] A: The assistant director.
[8] Q: Who was the director?
[9] A: John Oliver.
[10] Q: How long did Mr. De Martino remain the
[11] assistant director?
[12] A: He remained until Mr. Oliver retired and
[13] then he became the director and I don't recall when
[14] Mr. Oliver retired. And they changed the title at
[15] that time to vice president of employee relations
[16] from director of employee relations.
[17] Q: Did you report during the scope of your
[18] employment as corporate medical director and any
[19] subsequent positions after that to anyone other than
[20] Mr. De Martino or Mr. Oliver?
[21] A: When Mr. Oliver retired and Mr. De Martino
[22] became vice president of employee relations, then
[23] Jorge Smith became the assistant director. I
[24] reported to him. Then Mr. De Martino was moved to
[25] another job. Mr. Smith became the vice president of

1—01:56:54 25—01:58:15

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[1] employee relations and — I can't think of the
[2] fellow's name now. Anyway another fellow came in,
[3] Mark Suwyn, S-u-w-y-n, came in as the assistant
[4] director of employee relations and then Mr. Smith was
[5] named senior vice president of employee relations and
[6] Mr. Suwyn was named vice president of employee
[7] relations and that's when I was then named vice
[8] president of safety, health, environmental affairs.

[9] So I reported to Mr. Suwyn until I became
[10] a vice president and then I again reported to
[11] Mr. Smith but because of the way we were organized
[12] within Du Pont I had a dual reporting relationship
[13] because of my environmental activities.

[14] I reported to first an executive vice
[15] president in addition to reporting to Mr. Smith and
[16] then subsequently to the vice chairman of the board
[17] in addition to Mr. Smith.

[18] Q: And who was that executive vice president?

[19] A: Robert Forney, F-o-r-n-e-y.

[20] Q: And who was the other individual?

[21] A: The vice chairman was E.P. Blanchard, and
[22] when Dr. Blanchard retired, I reported then to a
[23] senior vice president on the environmental side. I
[24] still reported to the senior vice president of human
[25] resources who at that time was Jerry Bloomberg and

1—01:58:19 25—01:59:42

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[1] then I reported to Archie Dunnum (phonetic) who was
[2] the senior vice president with responsibility —
[3] overall responsibility for the whole area that I
[4] reported to in the environmental area.

[5] And then Mr. Bloomberg was moved to
[6] another job and then I reported to Mr. John Ogren,
[7] O-g-r-e-n, who was senior vice president of employee
[8] relations until he left the company and then there
[9] was another senior vice president of employee
[10] relations that I — Dan Burger, B-u-r-g-e-r, who I
[11] reported to until I retired.

[12] Q: So this particular presentation that
[13] eventually then got published the next year was
[14] reviewed by your superiors and approved?

[15] A: Yes.

[16] Q: And in this particular presentation in the
[17] second paragraph you're mentioning a burgeoning
[18] occupational health issue and its impact in the
[19] workplace. You say, quote, "in the last decade we've
[20] become intensely aware that long-term low level
[21] exposure to some chemicals and substances in amounts
[22] once considered safe can be harmful to humans. We
[23] are painfully aware too that we need more knowledge
[24] about these materials and what exposure levels they
[25] can be dangerous and how they can be handled safely."

1—01:59:46 25—02:00:36

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[1] And then in the next paragraph you say,
[2] quote, "perhaps as nettlesome as any of these
[3] dilemmas is the topic on which I shall comment today,
[4] a company's duty to report health hazards," close
[5] quote. Do you see that?

[6] A: Yes.

[7] Q: So you were aware that Du Pont had a duty
[8] to report health hazards, correct?

[9] MR. GREEN: Object to the form of the
[10] question. It calls for a legal conclusion.

[11] Q: (By Mr. Bilott) I'm asking you what you
[12] wrote here. You wrote that there is a duty to report
[13] health hazards? That's the topic of your article,
[14] correct?

[15] MR. GREEN: Well, are you just asking him
[16] to read what he wrote or —

[17] Q: (By Mr. Bilott) I'm asking the question,
[18] isn't that the topic of what the article is, a
[19] company's duty to report?

[20] A: The article is titled a company's duty to
[21] report health hazards.

[22] Q: And you are commenting on what you
[23] understood to be the duty to report, correct?

[24] A: Yes.

[25] Q: And you state, quote — and by the way, is

1—02:00:39 25—02:01:36

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[1] this one of the documents you reviewed prior to your
[2] deposition today?

[3] A: No.

[4] Q: In the next paragraph you say "in this day
[5] and age this proposition should be simple to answer.
[6] Yes, a company should disclose health hazard
[7] information. It should be candid and lay all the
[8] facts on the table. This is the only responsible and
[9] ethical way to go. This approach is the correct one
[10] of course and it is the way we try to proceed at
[11] Du Pont," close quote. Do you see that.

[12] A: Yes.

[13] Q: You still believe that's correct?

[14] MR. GREEN: I object on the grounds you
[15] didn't read the entire quotation.

[16] MR. BILOTT: Did I misquote the portion I
[17] read? Is that object to form?

[18] MR. GREEN: That's an objection to the
[19] form of the question because it was
[20] incomplete —

[21] Q: (By Mr. Bilott) Okay. You still believe
[22] that that statement is correct?

[23] A: That statement is correct but you took it
[24] out of context. If you'll read the next sentence
[25] after that, for instance — it starts off "for

2-02:01:37 25-02:02:45

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[1] instance, how much firm, unimpeachable laboratory
[2] evidence should a company have before it reveals a
[3] possible health hazard to its employees and the
[4] public? Who should get this information? In what
[5] form should it be presented? How should the
[6] information be reported so that the message is
[7] understandable yet not unnecessarily alarming? How
[8] much effort should be expended to locate former
[9] employees who may have worked with hazardous
[10] substances at one time? And when you find them how
[11] do you inform the members of this group?" And then
[12] it goes on to elaborate on that.
[13] Q: That's right. And then that's the point
[14] of your article. You then say down here in the next
[15] paragraph, the very last sentence, "we, I assume
[16] you're referring to Du Pont, have developed some
[17] guidelines, policies, and procedures in this area and
[18] we think they have served us well in our efforts to
[19] expand and communicate our knowledge on occupational
[20] and environmental health problems." Then you go on
[21] to discuss some of those, correct?
[22] A: Yes.
[23] Q: And, in fact, at the bottom of the page
[24] you talk about some incidence first that had come up
[25] at the Du Pont Chambers Works plant involving some

1-02:02:48 25-02:03:41

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[1] bladder tumors, correct?
[2] A: Yes.
[3] Q: That led to Du Pont coming up with an
[4] approach to assess those types of issues, correct?
[5] A: That's correct.
[6] Q: And you say that "this incident combined
[7] with our traditional concern for employee and public
[8] health and safety has compelled us to formulate a
[9] number of basic principles. They are applied broadly
[10] and they function as constants which are invoked
[11] whenever we consider the need to report hazards,"
[12] correct?
[13] A: Yes.
[14] Q: And did that, by the way, remain the case,
[15] these are — these next five that you mention,
[16] knowledge, commitment, responsibility, compliance,
[17] and communication, those remain the constants that
[18] Du Pont invokes whenever it's deciding whether to
[19] report?
[20] A: Up until the time that I retired they were
[21] constant.
[22] Q: And the next page you mention the first
[23] principle being knowledge. In the next paragraph you
[24] refer to commitment. The third one is
[25] responsibility. The fourth one is compliance. Do

1-02:03:45 25-02:04:46

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[1] you see that paragraph?
[2] A: Yes.
[3] Q: And with respect to compliance you say,
[4] quote, "where specific legal statutes exists such as
[5] the Toxic Substances Control Act, the Consumer
[6] Products Safety Act, the Occupational Safety and
[7] Health Act, Du Pont policy is to meet or go beyond
[8] the requirements contained in these laws and
[9] implementing regulation."
[10] A: Yes.
[11] Q: Did that remain Du Pont's policy?
[12] A: At least until the time I retired.
[13] Q: Then in the next paragraph you reference
[14] the fifth factor being communications, correct? And
[15] you talk about how employees are told of health risks
[16] and there's a sentence, quote, "appropriate groups
[17] outside Du Pont from customers to government agencies
[18] are notified of potential hazards and actions taken
[19] by Du Pont to minimize their impact," close quote.
[20] A: That's correct.
[21] Q: And the groups outside Du Pont would
[22] include neighbors exposed to emissions from a plant
[23] as well, correct?
[24] A: That's correct. Once we had looked at the
[25] first principle, which is knowledge, and we had

1-02:04:48 25-02:05:57

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[1] satisfied ourselves that the knowledge we had
[2] indicated that there may be some type of risk for
[3] which we needed to make a communication.
[4] Q: In fact, when you refer to Page 787 on
[5] that particular point, you say, the first full
[6] paragraph, quote, "we also report health hazards to a
[7] number of other groups, depending on the
[8] circumstances. The main criteria for these
[9] communications efforts are: will this information be
[10] useful to these groups? Will it serve to cause these
[11] organizations to take remedial action to protect
[12] people who might otherwise not be reached? Can these
[13] groups disseminate this health hazard information on
[14] a wider scale to provide additional health and safety
[15] benefits? When it comes to our customers, other
[16] producers of the same material, and appropriate
[17] government agencies, the answer is almost invariably
[18] yes." Do you see that?
[19] A: Yes.
[20] Q: Did that remain the case?
[21] MR. GREEN: I'm going to object to the
[22] form of the question.
[23] THE WITNESS: It was certainly the case up
[24] until the time I retired but again it goes back
[25] to the point I just made and that is based upon

1—02:05:59 25—02:07:00

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[1] the knowledge that we had that there is a health
[2] hazard.

[3] If we don't have knowledge that it's a
[4] health hazard, we see no reason to communicate
[5] to people something that we don't know anything
[6] about or that may not present a health hazard.

[7] Q: (By Mr. Bilott) This particular paragraph
[8] though that identifies the criteria for determining
[9] whether to inform these other groups, that would
[10] apply to neighbors outside the plant who are
[11] potentially exposed to a material as well, correct?

[12] A: If there's a health hazard for which
[13] there's some action that needs to be taken, yes.

[14] Q: But these are the factors that would be
[15] used, the same way you would approach whether to
[16] inform the other groups, this is how you would
[17] determine whether to inform the neighbors and
[18] community?

[19] A: Yes, if there's a health hazard.

[20] Q: Did that remain the approach at Du Pont?

[21] A: Until the time I retired.

[22] Q: And if we could refer to the last page,
[23] 788, the second to last paragraph you say, quote,
[24] "these examples," you had referred to some examples
[25] of how this had been applied in the past, "show how

1—02:07:04 25—02:08:02

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[1] seriously Du Pont considers its duty to report health
[2] hazards."

[3] So again you were acknowledging that
[4] Du Pont recognized there was a duty to report health
[5] hazards in certain circumstances, correct?

[6] A: Yes.

[7] Q: "Our system of disclosure is far from
[8] perfect. It's constantly being evaluated, refined,
[9] and updated. But to maintain credibility and good
[10] relations with our employees, customers, and the
[11] public, Du Pont management feels it is not only a
[12] matter of duty or of corporate ethics to report
[13] pertinent health information about products but that
[14] it is also good sound business practice. To do less
[15] would be both morally irresponsible and in many
[16] instances economically damaging," close quote. Do
[17] you see that?

[18] A: Yes.

[19] Q: And did that remain true throughout that
[20] entire time that you were at Du Pont?

[21] A: Yes, particularly if we had felt that we
[22] had a health hazard issue.

[23] Q: In fact, in the next paragraph you say
[24] "the facts of life in the occupational health and
[25] safety fields have changed drastically in recent

1—02:08:05 25—02:09:23

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[1] years. When it comes to such intensely emotional
[2] subjects as occupationally-related cancer and chronic
[3] illness caused by workplace conditions, a company
[4] cannot risk the possibility of being placed in the
[5] compromising position of withholding information or
[6] making a false judgment about who should know what.
[7] It is the duty of every company's management to
[8] discover and reveal the unvarnished facts about
[9] health hazards. We owe it to the people who work for
[10] us and those who depend on us for products and
[11] materials," close quote.

[12] Did that remain the Du Pont duty
[13] throughout the time you were there?

[14] A: Yes.

[15] MR. GREEN: Object to the form.

[16] Q: (By Mr. Bilott) When you say reveal the
[17] unvarnished facts, what did you mean?

[18] A: What we were referring to there, if we had
[19] information that something that we were doing created
[20] a health risk to our employees, the public or anybody
[21] else or our customers, then we had an obligation to
[22] reveal the fact to them that it was creating a health
[23] risk, and by unvarnished we meant to lay out the
[24] facts for them in the context in which it was
[25] understandable.

1—02:09:23 25—02:13:39

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[1] Q: So give them all the facts to make it
[2] understandable, not selected facts?

[3] A: Give them the facts they would need to
[4] make whatever decisions they needed to make as far as
[5] their own health was concerned.

[6] Q: And those would be the facts that were
[7] necessary to fully inform them of the true extent of
[8] the risk, right?

[9] A: Of the health risk.

[10] Q: Is that correct?

[11] A: That's correct.

[12] Q: And that would remain the position of
[13] Du Pont the entire time you were there?

[14] A: Yes.

[15] MR. BILOTT: If we could take a short
[16] break.

[17] (A recess was taken)

[18] (Plaintiffs' Exhibit 4 was marked
[19] for identification.)

[20] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[21] hand you what's just been marked as Exhibit 4 to your
[22] deposition and ask you if you could take a moment to
[23] look at that and tell me if you can identify what
[24] that is.

[25] A: This is a paper that was published in the

1—02:14:06 25—02:15:12

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[1] Journal of Occupational Medicine, January of 1983,
[2] titled The Critical Balance, Influence of Government
[3] Regulation, Past and Present, that was authored by me
[4] as the Sappington, C.O. Sappington Memorial Lecture,
[5] at the 67th annual meeting of the American
[6] Occupational Medical Association.

[7] That's one of the two honorary lectures
[8] that you're honored to be asked to give — one of the
[9] three really, be asked to give in the field of
[10] occupational medicine.

[11] Q: So this is a document that you, in fact,
[12] authored while employed at Du Pont?

[13] A: That's correct.

[14] Q: As was the last Exhibit Number 3, correct?

[15] A: You'd have to remind me again of Number 3
[16] so I could answer that question.

[17] Q: That was the 1978 article.

[18] A: Number 3 was A Company's Duty to Report
[19] Health Hazards from 1978, yes, and I did author that
[20] also.

[21] Q: While employed at Du Pont?

[22] A: Yes.

[23] Q: And why did you pick this particular
[24] topic?

[25] A: I was given the opportunity to pick

1—02:15:16 25—02:16:35

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[1] whatever topic I wanted to as a guest lecturer on
[2] this and I felt it was important because of
[3] government regulations and the interface between
[4] industrial occupational health programs and
[5] government regulations in trying to point out some
[6] way that we had to make sure that we stayed within
[7] the law as far as the governmental laws were
[8] concerned but also stay within our own corporate
[9] policies as far as what our policies were in the same
[10] areas.

[11] Q: So as the corporate medical director you
[12] had responsibility not only for making sure Du Pont
[13] complied with its internal corporate policies and
[14] duties but also to make sure that you understood on
[15] at least a working basis what laws would impact those
[16] issues; is that right?

[17] A: We had a policy within Du Pont that we
[18] would comply with company policy as far as safety and
[19] health issues were concerned or with governmental
[20] laws, whichever was the more strict.

[21] There are some cases in which the laws
[22] would be more strict than company policy and in that
[23] case we'd comply with the law. There were many cases
[24] in which corporate law was more strict than the law
[25] and in that condition we would comply with company

1—02:16:39 25—02:18:02

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[1] policy.

[2] Q: On Page 23 of this article, which is sort
[3] of in the middle of your discussion which began on
[4] the previous page about new legislation that had been
[5] coming out since the 1970s, there's a paragraph or
[6] discussion, I should say, that begins third — the
[7] third full paragraph on the page dealing with after
[8] passage of the Occupational Safety and Health Act.
[9] Do you see that?

[10] A: Yes.

[11] Q: And you reference there the discoveries of
[12] effects of DDT on the environment, vinyl chloride, et
[13] cetera, had resulted in the passage of the Toxic
[14] Substances Control Act in 1976. Then you go on to
[15] discuss issues with TSCA, correct?

[16] A: Correct.

[17] Q: So in your capacity and work experience at
[18] Du Pont as the Du Pont corporate medical director you
[19] became familiar with the requirements of TSCA as it
[20] applied to your functions, correct?

[21] A: That's correct.

[22] Q: You state, quote, "the Act gave the
[23] Environmental Protection Agency administrator the
[24] charge of protecting health and the environment from
[25] unreasonable risks due to exposure to harmful

1—02:18:04 25—02:19:12

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[1] chemicals and mixtures. TSCA is really as much a
[2] health and safety act as it is an environmental act.
[3] In the long run it may even have a greater impact on
[4] workplace safety and health than the Occupational
[5] Safety and Health Act." Do you see that?

[6] A: Yes.

[7] Q: And then you talk specifically about the
[8] requirement in TSCA for reporting, quote, "an
[9] unreasonable risk of injury to health or the
[10] environment." Do you see that?

[11] A: Yes.

[12] Q: And you say "but what constitutes
[13] unreasonable risk? You tell me!" And then you go on
[14] to discuss how you deal with that issue, correct?

[15] A: Yes.

[16] Q: In fact, in the last paragraph on that
[17] page you say "this is a challenging requirement for
[18] us because the law does not state exactly how serious
[19] an adverse effect must be or how reliable the
[20] information must be before an 8(e) notice must be
[21] filed. But it is an important one for we are really
[22] in one of the best positions to recognize adverse
[23] health effects not seen before. Yet if we are to
[24] detect problems that need immediate attention so that
[25] others can be spared, we must be constantly on the

1—02:19:14 25—02:20:17

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[1] lookout for them." Close quote. Do you see that?

[2] A: Yes.

[3] Q: Do you still agree with those statements?

[4] A: Yes.

[5] Q: In the next paragraph you say, quote,

[6] "when complying with TSCA's Section 8(e), we must

[7] exercise judgment and caution. On the one hand we do

[8] not want to generate unnecessary notices that do not

[9] constitute substantial risks. On the other hand, any

[10] sign of cancer, birth defects, or adverse effects

[11] that interfere with normal bodily functions should

[12] immediately trigger thoughts of an 8(e)

[13] notification." Then you go on. Do you see that?

[14] A: Yes.

[15] Q: Do you still believe that's correct?

[16] A: Yes.

[17] Q: I'd like to refer you now to the next page

[18] where you talk about the challenge to the profession

[19] because of all these new laws. You see on Page 24

[20] there's a heading Our Professional Challenge?

[21] A: Yes.

[22] Q: The second paragraph you say, quote, "the

[23] rising concern over health effects caused by

[24] long-term exposure to low levels of chemicals will

[25] continue to increase our role in corporate efforts to

1—02:20:21 25—02:21:16

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[1] safeguard employee health. We can no longer maintain

[2] and protect employees' health by merely staying in

[3] our offices conducting physicals and determining if

[4] people are well enough to return to work. Rather we

[5] must," and you emphasize the word must, "continually

[6] expand our efforts with regard to early detection and

[7] assist management in designing control programs that

[8] minimize needless exposures. At times we will have

[9] to play the devil's advocate, questioning the extent

[10] of exposure or the adequacy of protective measures.

[11] Hopefully by doing these things we will prevent

[12] needless exposure of large numbers of people to a

[13] substance that may later — that may be found later

[14] to be toxic," close quote. Do you see that?

[15] A: Yes.

[16] Q: And you still agree with that statement?

[17] A: Yes.

[18] Q: You still agree that Du Pont has a duty to

[19] do that?

[20] A: Yes.

[21] MR. GREEN: Object to the form.

[22] THE WITNESS: Du Pont has a duty to do it

[23] and Du Pont carried it out very well.

[24] Q: (By Mr. Bilott) And in the next paragraph

[25] you say "although there may be necessary and

1—02:21:16 25—02:22:28

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[1] reasonable regulations that facilitate safeguarding

[2] employee health, we should never rely on them alone

[3] to protect employee health. They are not crunches or

[4] substitutes for sound medical practices. They must

[5] be supplanted by the judgment of professional health

[6] experts and such judgement may call for action that

[7] goes beyond the dictate of existing regulations,"

[8] close quote. Do you still agree with that statement?

[9] A: Yes, and it goes back to the statement I

[10] made a little bit earlier. Du Pont complied —

[11] followed whichever was more strict, the government

[12] regulation or Du Pont policy, whichever was the more

[13] strict of those two.

[14] Q: And that could involve, in exercising

[15] appropriate medical judgment, doing something beyond

[16] what the regulations required, correct?

[17] A: That's correct. And that's why the

[18] company policy was set that way.

[19] Q: On the last page of your article there's a

[20] heading Challenge For Corporate Management. Do you

[21] see that?

[22] A: Yes.

[23] Q: About midway through that paragraph, that

[24] first paragraph under that heading, you say "the

[25] group that I view as having the greatest opportunity

1—02:22:30 25—02:23:31

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[1] to contribute to industrial safety and health is

[2] corporate management," close quote. Do you see that?

[3] A: Yes.

[4] Q: Why did you say that?

[5] A: Because I felt that way. The group that

[6] had the greatest opportunity to contribute to

[7] industrial safety and health had to be the management

[8] of the corporation because that's where the resources

[9] that you were able to use to provide safe and

[10] healthful workplaces came from. That's where the

[11] responsibility for providing safe and healthful

[12] workplaces came from.

[13] I never looked at it as my responsibility

[14] as corporate medical director to provide the safe and

[15] healthful workplace. I looked at it as my

[16] responsibility to advise corporate management what

[17] needed to be done to provide a safe and healthful

[18] workplace.

[19] Q: And then it's up to the corporate

[20] management to make sure they implement the

[21] recommendations and do whatever is the right thing to

[22] do?

[23] A: They are really the only ones who can

[24] because they have the resources to do it. We can

[25] make recommendations and we can follow up on the

1—02:23:32 25—02:25:14

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[1] recommendations but corporate management then has to
[2] make the final judgment and the final implementation
[3] to do that.

[4] Q: In your position as medical director and
[5] the subsequent positions until you retired who was
[6] the, quote, corporate management that you would be
[7] making your recommendations to?

[8] A: It would vary depending upon what the
[9] issue was, what plant it was on, what material it
[10] involved, what product it involved.

[11] I would go to whoever had responsibility
[12] for that particular plant or that particular product
[13] and talk with them about it and make a recommendation
[14] to them.

[15] Q: So it could be business people within a
[16] particular business unit at Du Pont that would be the
[17] ones getting the recommendations and having the
[18] responsibility for implementing them?

[19] A: Yes.

[20] Q: Was Exhibit 4 a document that you reviewed
[21] prior to your deposition today?

[22] A: No.

[23] Q: Were there any other articles that you had
[24] published that we haven't looked at so far that you
[25] remember reviewing prior to your deposition today?

1—02:25:16 25—02:26:48

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[1] A: That I had published?

[2] Q: Yes.

[3] A: No.

[4] Q: Dr. Karrh, in your employment experience
[5] with Du Pont did you become personally familiar with
[6] a chemical used by Du Pont known as C-8?

[7] A: I have to ask you to define what you mean
[8] by personally. I became familiar with that chemical.

[9] Q: When did you first hear of that chemical,
[10] if you recall?

[11] A: It was in the late seventies, '79 plus or
[12] minus when I first became aware of C-8.

[13] Q: And is it fair to say that during your
[14] employment experience with Du Pont you were
[15] personally involved in the medical decisions made by
[16] Du Pont with respect to health hazards —

[17] A: Yes.

[18] Q: — from C-8?

[19] A: Yes.

[20] Q: How do you recall C-8 first coming to your
[21] attention?

[22] A: The first recollection I have of it is
[23] when the supplier of the chemical, the 3M Company,
[24] provided Du Pont with some information that indicated
[25] that the particular chemical had — from a test they

1—02:26:52 25—02:28:40

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[1] had on rats, looked like it may have caused some eye
[2] abnormality in the rats that had been subjected to
[3] exposure to the chemical.

[4] Q: You in fact had had communications though
[5] with 3M years earlier about C-8 when 3M had informed
[6] you about having found C-8 in the blood of its
[7] workers, correct?

[8] A: I don't recall that I personally had. I
[9] may have. I just don't recall it. But I don't
[10] recall that I personally had.

[11] Q: In fact, you were aware of an article that
[12] came out in 1976 referencing there were researchers
[13] stating that they thought they were finding PFOA in
[14] general population blood supplies, weren't you?

[15] A: I don't personally recall knowing at that
[16] point in time that.

[17] Q: Do you recall in 1976 doing research on
[18] what type of information was publicly available
[19] regarding the amount of fluoride in human blood
[20] supplies?

[21] A: I don't recall that specifically. You can
[22] show me a document that shows that I did but I don't
[23] recall that.

[24] Q: My next question was going to be do you
[25] recall why you were asking for such research to be

1—02:28:44 25—02:30:20

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[1] done?

[2] A: No, because I don't even recall asking for
[3] it to be done.

[4] MR. BILOTT: Mark that.

[5] (Plaintiffs' Exhibit 5 was marked
[6] for identification.)

[7] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[8] hand you what's been marked as Exhibit 5 in your
[9] deposition and ask you to take a moment to look at
[10] that and tell me if you can identify what this is.

[11] I'll represent to you it's an excerpt from
[12] a larger document and in particular I'm referring you
[13] to Item 69.

[14] Have you had a chance to look at Item 69?

[15] A: Yes, I have.

[16] Q: Do you have an understanding as to what
[17] that is?

[18] A: It looks to me like it's an abstract.

[19] This is a document entitled Abstracts: Fifteenth
[20] Annual Meeting. And then down at the bottom it's
[21] handwritten Toxicology and Applied Pharmacology,
[22] Volume 37, 1976. Number 69 is titled Organic
[23] Fluoride in Human Plasma: Its Distribution and
[24] Partial Identification.

[25] Q: And, by the way, I'm sorry to interrupt

1—02:30:21 25—02:32:19

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[1] you, but do you recognize the handwriting you just
[2] referred to?
[3] A: No, I don't.
[4] Q: I'm sorry. Go ahead.
[5] A: And this is authored by a group from the
[6] University of Rochester in New York and from the
[7] University of Florida in Gainesville.
[8] Q: You'll notice that in this particular
[9] abstract that's a reference to the fact that plasma
[10] samples were collected from a hundred and six
[11] individuals living in five different cities. Do you
[12] see that?
[13] A: I would have to read it. To my knowledge
[14] I have never seen this document before. If you'll
[15] give me about five minutes, I'll read it.
[16] I just scanned it, but if you're going to
[17] ask me specific questions, I would like to have the
[18] right to read it completely first.
[19] Q: Sure. Go ahead.
[20] A: Okay.
[21] Q: Have you had a chance to read it?
[22] A: Yes, I have.
[23] Q: In this particular abstract it's
[24] referencing work by Dr. Taves, Grey, and Brey, and
[25] there's a reference to plasma samples having been

1—02:32:22 25—02:33:26

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[1] collected from a hundred and six individuals living
[2] in five different cities, correct?
[3] A: Yes.
[4] Q: And that these researchers looked into the
[5] levels of inorganic fluoride in the plasma and
[6] organic fluoride in the plasma, correct?
[7] A: That's what it says.
[8] Q: And it's your understanding, isn't it,
[9] that inorganic fluoride is the type of fluoride that
[10] water supplies typically put into the water to
[11] fluorinate water, correct?
[12] A: That's not my understanding. You just
[13] informed me of that.
[14] Q: Do you know the difference between
[15] inorganic fluoride in water versus organic fluoride
[16] in water?
[17] A: I know the difference between inorganic
[18] fluoride and organic fluoride. I don't know the
[19] difference in water as you're trying to put it in
[20] that context.
[21] Q: Let me just refer you down to the last
[22] couple of sentences in the abstract where they're
[23] referring to what they found with respect to the
[24] organic fluoride in the blood. And they say, quote,
[25] "the dominant peak showed an nmr pattern." By the

1—02:33:36 25—02:34:27

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[1] way, do you know what that means?
[2] A: Not in this context. I know what it means
[3] in a medical context. In fact, the nmr did not exist
[4] in 1976.
[5] Q: In the medical context —
[6] A: In the medical context —
[7] Q: Yeah, what did you understand it to mean?
[8] A: Nuclear magnetic resonance, which now is
[9] called the MRI.
[10] Q: "The dominant peak showed an nmr pattern
[11] consistent with a derivative of perfluorinated
[12] octanoic acid. Perfluorinated octanoic acid
[13] derivatives are widely used commercially because of
[14] their surface active properties. This work suggests
[15] the organic fluorine in human plasma is at least
[16] partially the result of contamination from industrial
[17] sources and probably has no relationship to
[18] fluoridation," close quote. Do you see that?
[19] A: Yes.
[20] Q: Now, do you recall seeing that research in
[21] 1976?
[22] A: I have never seen this article before nor
[23] have I ever seen that research that was reported on
[24] here.
[25] Q: So it's your testimony you've never seen

1—02:34:29 25—02:36:22

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[1] this work by Taves and Grey?
[2] A: As I've said a couple times, my testimony
[3] is I have never seen this abstract nor the original
[4] work from which this abstract was taken.
[5] Q: Why then were you asking for a search of
[6] information pertaining to blood fluoride levels in
[7] man and animals in December of 1976?
[8] A: I don't recall that I was asking. You
[9] asked me that earlier and I told you I didn't recall.
[10] MR. BILOTT: Mark that, please.
[11] (Plaintiffs' Exhibit 6 was marked for
[12] identification.)
[13] Q: (By Mr. Bilott) Dr. Karrh, I've just
[14] handed you what's been marked as Exhibit 6 and ask
[15] you to take a moment to look at that and tell me if
[16] you can identify what this is.
[17] A: This is a letter from Richard Graham who
[18] was in the Haskell Laboratory information section
[19] addressed to me, entitled Blood Fluoride Levels in
[20] Man and Animals.
[21] Q: And you see a received stamp up at the
[22] top, December 6th, 1976, Bruce W. Karrh, M.D.?
[23] A: Yes, I do.
[24] Q: Do you recognize that stamp?
[25] A: Yes, I do.

1—02:36:22 25—02:37:10

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(1) Q: What does that stamp signify?
(2) A: It signifies that it was received at least
(3) by my secretary, perhaps by me. The only reason I
(4) say perhaps by me is because after I had seen a
(5) document every time I would initial right in the
(6) middle of the stamp and this was not initialed in the
(7) stamp.

(8) I'm not saying I did not see it. I'm just
(9) saying that I cannot verify definitely that I did see
(10) it.

(11) Q: Was it your common practice during the
(12) time that you were employed at Du Pont to review
(13) documents that were sent to you by the Du Pont
(14) employees?

(15) A: Yes.

(16) Q: Do you have any reason to believe you
(17) didn't receive this document?

(18) A: No. As I stated, the only reason it makes
(19) me even question this is because I normally initial
(20) in the middle of the stamp.

(21) Q: In fact, Richard Graham, who was a Du Pont
(22) employee, correct?

(23) A: Yes.

(24) Q: And, in fact, he ended up being the head
(25) of the Du Pont AEL committee, correct?

1—02:37:14 25—02:38:15

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(1) A: I don't know that that's correct. I don't
(2) know that it's not correct but I don't know that it
(3) is.

(4) Q: And by AEL, acceptable exposure limit
(5) committee, are you familiar with the committee?

(6) A: Yes.

(7) Q: Okay.

(8) A: I don't believe Richard was ever the head
(9) of it. I think Richard was the person who would pull
(10) together the information that would be used by the
(11) AEL committee to make decisions on AEL's.

(12) Q: Mr. Graham is saying that "at your request
(13) I conducted a search for information pertaining to
(14) blood fluoride levels in man and animals. As a large
(15) volume of information is available, you agreed to a
(16) preliminary search for information on man only."

(17) And do you recall why you were asking in
(18) 1976 for research on blood fluoride levels in man?

(19) A: No, I don't and I don't have any reason to
(20) doubt that I asked for it. I just don't have — I
(21) don't recall having asked for it or why I asked for
(22) it.

(23) Q: So do you know why you then sent this
(24) information to the medical director at 3M Company?

(25) A: No, I don't. I don't recall doing that.

1—02:38:17 25—02:39:35

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(1) Q: Do you recall having conversations with
(2) Frank Ubel?

(3) A: Many conversations with Frank Ubel.

(4) MR. BILOTT: Mark this, please.

(5) (Plaintiffs' Exhibit 7 was marked
(6) for identification.)

(7) Q: (By Mr. Bilott) Dr. Karrh, I'm handing
(8) you what's been marked as Exhibit 7 and ask you to
(9) take a moment to look at that and tell me if you can
(10) identify what this is.

(11) A: It's a cover letter from me to Frank Ubel,
(12) who is medical director of 3M Company, dated December
(13) 16th, 1976, and attached to it is obviously the list
(14) of articles that I had received from — apparently
(15) received from Haskell Laboratory, a bibliography of
(16) articles that pertain to blood fluoride levels in
(17) man.

(18) Q: You recognize that as your signature on
(19) the first page?

(20) A: Yes.

(21) Q: So this is a document you created during
(22) the course of your employment at Du Pont?

(23) A: Yes.

(24) Q: Again why were you sending information on
(25) blood fluoride levels in man to 3M?

1—02:39:38 24—02:41:13

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(1) A: I don't recall having sent it. I
(2) obviously did but I don't recall having sent it. But
(3) Frank and I were in an organization together, a
(4) couple of organizations together, and it's possible
(5) he asked me to look at Haskell's records because
(6) Haskell had better records than they had, others had,
(7) and see. I don't recall him asking me that. I don't
(8) recall the circumstances.

(9) Q: Do you recall why you would be discussing
(10) fluoride blood levels with 3M as opposed to somebody
(11) else, some other company?

(12) A: Well, I wasn't discussing them with 3M. I
(13) was discussing them with Frank Ubel, who I've already
(14) identified as being a friend.

(15) Q: But he was at the time the medical
(16) director at 3M, correct?

(17) A: Yes, but that doesn't mean I had a
(18) relationship with 3M. I had a relationship with
(19) Dr. Ubel.

(20) Q: Do you know why special exams were then
(21) run of Du Pont employees in 1976 checking fluoride
(22) levels in urine?

(23) A: No, I don't. I don't recall.

(24) MR. BILOTT: Mark that.

(25) (Plaintiffs' Exhibit 8 was marked

1—02:41:17 25—02:43:16

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[1] for identification.)

[2] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[3] hand to your counsel Plaintiffs' Exhibit 8.

[4] Dr. Karrh, I'm going to hand you
[5] Plaintiffs' Exhibit 8, which the staple came out of.
[6] It's a two-page document, ask you to take a look at
[7] that and tell me if you can tell me what that is.

[8] A: It looks like it's a handwritten document
[9] that on the top is titled fluoridated and under that
[10] is water supply and toothpaste and on the other
[11] column is date and time urine voided. One is
[12] baseline and one is final sample. Then there's some
[13] charted times and yes and no's in there and it's
[14] something about the baseline urine sample was voided
[15] after worker had been away from the work site
[16] potential exposure to fluorides for at least 48 hours
[17] and then some more data and then on the second page
[18] there's subsequent data, different — it looks like
[19] different data titled special exams, fluoride in
[20] urine sample for MAC.

[21] Q: Do you see a date up there in handwriting,
[22] 11/16/76, on the second page in the top right corner?

[23] A: On the second page?

[24] MR. GREEN: Excuse me. I think the way it
[25] was marked, the pages got out of order.

1—02:43:20 25—02:44:35

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[1] Q: (By Mr. Bilott) Well, it's the first page
[2] of your exhibit, it says, the top right-hand corner,
[3] 11/16/76. Do you see that?

[4] A: Yes.

[5] Q: By the way, do you recognize the
[6] handwriting here?

[7] A: No. I've never seen this document.

[8] Q: During the course of your employment with
[9] Du Pont did you become familiar with the handwriting
[10] of a Gerald Kennedy of Du Pont?

[11] A: Not to where I'd recognize Gerry's
[12] writing.

[13] Q: And again do you know why in November of
[14] 1976 there would be data here referencing at the top
[15] Du Pont Chambers Works and the fax information at
[16] least from 1999, urine samples from employees with,
[17] quote, potential exposure to fluorides?

[18] A: No, I don't.

[19] MR. BILOTT: Mark this.

[20] (Plaintiffs' Exhibit 9 was marked
[21] for identification.)

[22] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[23] hand you what's been marked as Exhibit 9 and ask you
[24] to take a moment to look at this and tell me if you
[25] can identify what that is.

1—02:44:37 25—02:45:52

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[1] A: This is a — don't say in writing. It's a

[2] memo Du Pont used from Ray Morrow to Frank Bower.

[3] The subject is meeting with 3M May 30th.

[4] Q: You see a stamp down toward the bottom
[5] that says received May 16th, 1978, Bruce W. Karrh,
[6] M.D.?

[7] A: Yes

[8] Q: That would indicate this was a document
[9] received in your office; is that right?

[10] A: Yes, it would.

[11] Q: And you'll see there's a reference here —
[12] first of all, who is Frank Bower?

[13] A: Frank Bower was in the Freon products
[14] group in Du Pont that made Freon products. He
[15] actually was in the technical group.

[16] Q: And you recognize the format of this
[17] document based on your work experience at Du Pont as
[18] a Du Pont-generated memo, correct?

[19] A: Well, Du Pont used the don't say it write
[20] it as a way of sending notes and so I have no reason
[21] to think this is not a Du Pont-generated document.

[22] Q: Who is Ray Morrow?

[23] A: He's identified here as being from Haskell
[24] Laboratory but I don't remember Ray Morrow. He may
[25] have been there when I was there and I just don't

1—02:45:53 25—02:47:04

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[1] remember.

[2] Q: You'll see this document which is dated
[3] May 15th of 1978, says that "attached is a copy of a
[4] paper by Guy and Taves concerning organic
[5] fluorocompounds in human plasma. The discussion
[6] section deals specifically with possible
[7] environmental sources of perfluorinated fatty acids."

[8] And then attached is the full copy of the
[9] paper by Guy, Taves, and Brey that we've referenced
[10] earlier in the abstract. Do you see that?

[11] A: Yes.

[12] Q: This was sent to you, wasn't it?

[13] A: Well, one would think it was since it has
[14] my stamp on it.

[15] Q: And you look at this text of this
[16] particular article, the second page of the Guy,
[17] Taves, Brey article, Page 118, you see that at the
[18] top?

[19] A: Yes.

[20] Q: The first full paragraph, it says "in this
[21] study plasma samples were collected from a total of a
[22] hundred and six individuals living in five different
[23] cities with between 0.1 and 5.6 ppm fluoride in their
[24] public water supply. These were analyzed for both
[25] forms of fluoride. In this way the relationship

1—02:47:08 25—02:48:09

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[1] between exchangeable fluoride concentration in the
[2] plasma and the consumption of fluoride through
[3] drinking water was reevaluated and the prevalence of
[4] the non-exchangeable form was further studied. With
[5] respect to the chemical nature of the
[6] non-exchangeable form of fluoride, several lines of
[7] evidence suggested that it was some sort of organic
[8] fluorocompound of intermediate polarity, tightly
[9] bound to plasma albumin in the blood." And it goes
[10] on. Do you see that?

[11] A: Yes.

[12] Q: The end of the paragraph, it says "based
[13] on these considerations, the non-exchangeable form of
[14] fluoride in human plasma is referred to as organic
[15] fluorine throughout the rest of the paper." Do you
[16] see that?

[17] A: Yes.

[18] Q: And during the course of your employment
[19] with Du Pont you're familiar with the term organic
[20] fluorine being used in connection with looking at
[21] human blood samples, correct?

[22] A: Yes.

[23] Q: If you'd look to Page 121 of the Guy,
[24] Taves article, there's a heading "Blood Plasma" in
[25] the page. Do you see that?

1—02:48:09 25—02:49:25

Page 120

[1] A: Yes.

[2] Q: "Human plasma was obtained from blood
[3] banks in five cities." Do you see that?

[4] A: Yes.

[5] Q: And if you flip a couple more pages back
[6] to Page 126, Table II provides a summary of the
[7] levels of inorganic and organic fluorine found in the
[8] blood plasma from people in those five cities. Do
[9] you see that?

[10] A: Yes.

[11] Q: Do you see that there's a reference to the
[12] plasma results being provided in terms of a
[13] designation uM? You see that in the chart, as far as
[14] telling you how much was in the blood they reference
[15] it as some amount uM?

[16] A: On the far right side?

[17] Q: Right. Do you see that?

[18] A: Yes.

[19] Q: Do you have an understanding as to how
[20] that quantity designation translates into parts per
[21] billion or parts per million?

[22] A: No, I don't. That's micromoles or
[23] micromolecules, but I don't know — probably
[24] micromoles but I don't know how it translates.

[25] Q: So you see here in this particular chart,

1—02:49:28 25—02:50:40

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[1] data is provided indicating that inorganic and
[2] organic fluorine was being found in human plasma in
[3] blood supplies in five different general population
[4] cities, correct?

[5] A: That's what it would indicate.

[6] Q: I would like to refer you to the
[7] discussion section, Page 131 of the article. There's
[8] underlining which I can represent to you we did not
[9] put on. It was in this version when we got it from
[10] Du Pont.

[11] But what's underlined is the sentence,
[12] quote, "these findings suggest that there is
[13] widespread contamination of human tissues with trace
[14] amounts of organic fluorocompounds derived from
[15] commercial products. All available information on
[16] the subject is in accordance with this
[17] interpretation. A series of compounds having a
[18] structure consistent with that found here for the
[19] predominant form of organic fluorine in human plasma
[20] is widely used commercially for their potent
[21] surfactant properties. For example, they are used as
[22] water and oil repellents," and it goes on. Do you
[23] see that?

[24] A: Yes.

[25] Q: In the next paragraph there's a

1—02:50:45 25—02:51:49

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[1] sentence — they make the conclusion "the prevalence
[2] of organic fluorine in human plasma is probably quite
[3] high since a hundred and four of the hundred and six
[4] plasma samples tested here and all 35 in an earlier
[5] study had measurable quantities. The prevalence of
[6] the particular compounds isolated and characterized
[7] here, i.e., perfluoro fatty acid (C6-C8) derivatives,
[8] is not known," and it goes on. Do you see that?

[9] MR. GREEN: I'm going to object to the
[10] form of these questions of the witness — asking
[11] the witness whether he sees it or not. We all
[12] can see it.

[13] MR. BILOTT: That's my question. Are you
[14] objecting to the form?

[15] MR. GREEN: Yes.

[16] Q: (By Mr. Bilott) Okay. If you'd refer to
[17] the next page, Page 132, there's a paragraph. Again
[18] there's underlying there. Do you see the paragraph
[19] that begins "little has been published?" Do you see
[20] that paragraph?

[21] A: Yes.

[22] Q: There's a sentence, "little has been
[23] published about the metabolic handling and toxicology
[24] of perfluorinated fatty acid derivatives." Then the
[25] next underlined sentence is "this was surprising with

1—02:51:51 25—02:53:01

Page 123

[1] respect to the widespread commercial use of such
[2] compounds. It would appear from information
[3] presented here that rapid excretion of such compounds
[4] into urine is unlikely since they are bound to
[5] albumin in the blood," close quote.

[6] What do you recall doing after getting
[7] this information in this memo?

[8] MR. GREEN: Object to the form of that
[9] question.

[10] THE WITNESS: Personally I don't recall
[11] getting it, as I stated earlier. Secondly I
[12] don't recall doing anything.

[13] This looks to me like it would be part of
[14] the Freon products group which is the
[15] perfluorinated compound that they were using and
[16] they were the ones had an interest in it and had
[17] apparently requested from Ray Morrow at Haskell
[18] Laboratory a copy of this paper about organic
[19] fluorocompounds in human plasma.

[20] Q: (By Mr. Bilott) Frank Bower and Ray
[21] Morrow were both Du Pont employees, correct?

[22] A: Yes.

[23] Q: So they clearly had knowledge of what was
[24] in this document, correct, since they're forwarding
[25] it?

1—02:53:01 25—02:54:43

Page 124

[1] A: I would think so, yes.

[2] Q: Do you know why this particular article
[3] that discusses perfluorinated acids in general
[4] population blood was referenced for a meeting with
[5] 3M?

[6] A: No, I don't.

[7] Q: To your understanding, looking at the data
[8] we just looked at though, that article indicated
[9] having found organic fluorine that the authors
[10] contributed to perfluorinated fatty acids —

[11] A: I would have to look at the document
[12] again —

[13] Q: — in general population blood, correct?

[14] A: Kind of recall for me what page that's on
[15] so I can —

[16] Q: The chart, Table II, Table II, Page 126.

[17] A: That chart is titled concentration of
[18] fluoride and organic fluorine in blood plasma samples
[19] from five cities having different fluoride
[20] concentrations in their water supply, and one of
[21] them, based upon the symbols that they had used up
[22] there earlier, means fluoride in plasma, and the
[23] other, based upon the symbols they used earlier,
[24] means organic fluorine in plasma, and they both show
[25] that there were levels of both compounds, both

1—02:54:52 25—02:56:17

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[1] fluorine and organic — both fluoride and organic
[2] fluorine.

[3] Q: And it's your understanding though that
[4] this is referencing results from blood supplies in
[5] five different cities, correct?

[6] A: That's what it says.

[7] Q: And that the authors are identifying the
[8] organic fluorine as being perfluorinated fatty acids,
[9] correct?

[10] A: I'm not sure where you saw that. Maybe we
[11] did see it and I just don't recall but I don't —

[12] Q: Maybe the easiest way to do this is to
[13] refer back to the abstract. Let me refer you
[14] specifically here.

[15] A: You want to go back to the discussion?

[16] Q: Yes. Let me find that then.

[17] A: On Page 131.

[18] Q: The authors are saying these findings
[19] suggest that there is widespread contamination of
[20] human tissues with trace amounts of organic
[21] fluorocompounds derived from commercial products.
[22] And they indicate that a series of compounds
[23] consistent with that is this perfluorinated material
[24] that we talked about earlier in the article, correct?

[25] A: The one you just took out of context says

1—02:56:21 25—02:57:22

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[1] a series of compounds having a structure consistent
[2] with that found here for the predominant form of
[3] organic fluorine in human plasma is widely used
[4] commercially for their potent surfactant properties.

[5] Q: Look at the memo from the two Du Pont
[6] employees that's forwarding this document. These
[7] employees understood this article to deal
[8] specifically with possible environmental sources of
[9] perfluorinated fatty acids, correct?

[10] A: That's what they say in their note. You
[11] asked me a question about it and I was looking to see
[12] exactly where it was in the paper.

[13] Q: Do you read this any differently?

[14] A: I read that note the same way you read it.

[15] Q: Do you read this paper any differently —

[16] A: I haven't read this paper except just what
[17] little bit you let me read while we're sitting here.
[18] I just scanned it.

[19] Q: Does the received by you May 16th, 1978,
[20] do you have any doubt you received this?

[21] A: No. I said earlier I have no doubt I
[22] received it.

[23] Q: Okay.

[24] A: Now, whether I read it or not is a totally
[25] different issue but I don't know that.

1—02:57:26 25—03:58:37

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[1] Q: But you have no doubt, after looking at
[2] what we looked at, the Du Pont memos, that Du Pont
[3] had this information in May of 1978?
[4] A: Some people in Du Pont had this
[5] information in 1978, yes.
[6] MR. GREEN: Is this a good time to break?
[7] MR. BILOTT: Why don't we go ahead and
[8] take a break.
[9] (A recess was taken)
[10] Q: (By Mr. Bilott) Dr. Karrh, we're back
[11] from a lunch break. Did you discuss any aspect of
[12] this deposition during your break?
[13] A: No.
[14] Q: I want to go back to something we talked
[15] about earlier this morning which is your current
[16] relationship with Du Pont. Is there any sort of
[17] consulting agreement between you and Du Pont?
[18] A: No.
[19] Q: Do you understand there to be an attorney
[20] in the room here today representing you during this
[21] deposition?
[22] A: Yes.
[23] Q: Who is that?
[24] A: Mr. Green.
[25] Q: Do you plan to testify in this case other

1—03:58:44 25—03:59:30

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[1] than in the deposition?
[2] MR. GREEN: I object and instruct him not
[3] to answer that. That's a decision that
[4] Du Pont's counsel will make.
[5] Q: (By Mr. Bilott) I'm asking you do you
[6] have any plans at this point to provide testimony at
[7] trial in this case?
[8] MR. GREEN: Well, the objection and
[9] instruction still stands. He is not —
[10] MR. BILOTT: I don't want a speaking
[11] objection. Are you objecting and instructing
[12] him not to answer —
[13] MR. GREEN: Yes. I said that.
[14] MR. BILOTT: — for privilege? All right.
[15] Q: (By Mr. Bilott) Have you been asked to
[16] testify at trial in this case?
[17] MR. GREEN: Same objection, same
[18] instruction.
[19] Q: (By Mr. Bilott) Have you been asked to
[20] prepare any report by anyone for use in connection
[21] with this case?
[22] MR. GREEN: You can answer that.
[23] THE WITNESS: No.
[24] Q: (By Mr. Bilott) Do you plan to?
[25] A: No.

1—03:59:31 25—04:00:57

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[1] Q: Do you know of anyone else who will be
[2] providing testimony on behalf of Du Pont at the trial
[3] of this case?
[4] A: No.
[5] Q: I'd like to go back to where we were
[6] before the break, and we were looking at information
[7] provided to Du Pont in 1978 regarding organic
[8] fluorine in general population blood.
[9] What action, if any, did the Du Pont
[10] medical department take after receiving information
[11] that there was organic fluorine that was linked with
[12] C-8 being found in general population blood?
[13] MR. GREEN: Object to the form of the
[14] question.
[15] THE WITNESS: What time frame are you
[16] talking about?
[17] Q: (By Mr. Bilott) At the time that
[18] information was received in 1978.
[19] A: I think I'd have to look at a document to
[20] see exactly what we did. I know we looked at what we
[21] had available and looked at what information may have
[22] been available to us but I don't recall exactly
[23] specifically what we did at that point in time.
[24] Q: Do you recall whether Du Pont ever
[25] disclosed to the U.S. EPA knowledge of the presence

1—04:01:00 25—04:02:12

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[1] of organic fluorine, potentially being C-8, in
[2] general population blood supplies?
[3] A: I don't know. I don't recall.
[4] Q: Were you ever involved in any discussions
[5] on that topic at any time while you were employed at
[6] Du Pont?
[7] A: As regards C-8 —
[8] Q: Disclosing to the United States EPA that
[9] Du Pont had information of the nature we just looked
[10] at here, indicating the organic fluorine in general
[11] population blood supplies?
[12] A: When you reference that we just looked at,
[13] what you were looking at were documents that came
[14] from a published paper by someone other than a
[15] Du Pont employee that said that.
[16] I don't recall that Du Pont had any
[17] obligation to disclose to the U.S. EPA. This was a
[18] published paper done by someone else and the
[19] publication of that paper referenced more to the
[20] Freon products fluorocarbons than it did to C-8.
[21] It was referencing principally because of
[22] use of CFC's as propellants and as coolants and
[23] refrigerants but general population exposure
[24] potential there.
[25] Q: I guess getting back to the question

1—04:02:14 25—04:03:31

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[1] though, did you ever participate in any discussions
[2] about disclosing that information for whatever reason
[3] to the U.S. EPA?

[4] MR. GREEN: Object to the form.

[5] THE WITNESS: What information?

[6] Q: (By Mr. Bilott) The information in that
[7] particular report indicating the presence of organic
[8] fluorine linked to PFOA, or C-8, in general
[9] population blood.

[10] MR. GREEN: Object to the form and it's
[11] been asked and answered.

[12] THE WITNESS: I don't recall such
[13] discussions.

[14] Q: (By Mr. Bilott) I guess getting back to
[15] the question before that, what, if anything, did
[16] Du Pont medical do after receiving that information
[17] that we just discussed?

[18] A: What information we just discussed?

[19] Q: The 1978 article.

[20] A: The article that came through Haskell
[21] Laboratory —

[22] Q: Exhibit Number 9.

[23] A: I don't recall anything specifically being
[24] done from Du Pont medical on this.

[25] Q: What information did Du Pont have at the

1—04:03:41 25—04:05:51

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[1] time indicating a safe level, if any, of C-8 in human
[2] blood in 1978?

[3] A: I don't recall any information we had at
[4] that time. I don't recall that we did or that we
[5] didn't, but if you have a document, I'll be glad to
[6] review it and see what it said then.

[7] Q: I'm not asking about any particular
[8] document. I'm just asking for your recollection of
[9] what transpired.

[10] A: That's only been 26 years ago. Sir, I'm
[11] sorry. I just don't recall.

[12] MR. BILOTT: If you can mark this, please.

[13] (Plaintiffs' Exhibit 10 was marked
[14] for identification.)

[15] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[16] hand you what's been marked as Exhibit 10 and ask you
[17] to take a moment to look at that and tell me if you
[18] can identify what that is.

[19] A: This is a letter written from me to F.E.
[20] French, dated June 16th, entitled Fluorochemicals in
[21] Blood.

[22] Q: And, in fact, this particular memo that
[23] you — you recognize that as your signature on the
[24] last page?

[25] A: Yes.

1—04:05:51 25—04:06:58

Page 133

[1] Q: And a document you prepared while employed
[2] at Du Pont?

[3] A: Yes, it is.

[4] Q: And you are providing a recommendation of
[5] some testing to be done on Du Pont workers based on
[6] information about fluorochemicals in the blood,
[7] FC-143 in particular, correct?

[8] A: That's correct, plus other unidentified
[9] fluorochemicals in the blood.

[10] Q: And, in fact, you say "the medical
[11] division recommends the following course of action
[12] for Du Pont employees whose jobs have potential for
[13] exposure to Telomer A and its non-polymeric
[14] derivatives," right?

[15] A: That's correct.

[16] Q: And you then provide a series of
[17] recommendations, Items 1 through 7, to be performed,
[18] including Number 4, "obtain blood fluorochemical
[19] levels on persons who have never had potential for
[20] occupational exposure to fluorochemicals to establish
[21] background," and Number 5, "obtain blood
[22] fluorochemical levels on representative employees
[23] with various potentials for exposures," correct?

[24] MR. GREEN: I object to the form of the
[25] question because it's an incomplete reading of

1—04:07:00 25—04:07:55

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[1] the quotation.

[2] Q: (By Mr. Bilott) Are those sentences —
[3] let me rephrase it this way. You made
[4] recommendations to do blood testing, correct?

[5] A: Yes.

[6] Q: And the recommendations included blood
[7] testing of Du Pont employees with potential for
[8] exposures to various fluorochemicals, correct?

[9] A: Let me read both of those and that way we
[10] make sure we get them in the proper context —

[11] Q: I'm not asking about the sentences here.
[12] I'm asking whether you made a recommendation to test
[13] Du Pont employees who had exposures to various
[14] fluorochemicals?

[15] A: I think we can clarify it if I read both
[16] of those recommendations and that way we'll know
[17] exactly what recommendations I made.

[18] Number 4 is "obtain blood fluorochemical
[19] levels on persons who have never had potential for
[20] occupational exposure to fluorochemicals to establish
[21] background levels for a baseline. These tests can be
[22] obtained on Wilmington office employees as a part of
[23] the periodic physical examinations given in the
[24] Nemours medical facility." Number 5, "obtain blood
[25] fluorochemical levels on representative employees

1—04:07:57 25—04:08:46

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[1] with various potentials for exposures to various
[2] fluorochemicals. If this is done at the same time as
[3] the employee's periodic physical examination, a
[4] comprehensive examination should be done with careful
[5] documentation of the results. A urine specimen
[6] should be obtained for later analysis for
[7] fluorochemical levels in the event the blood level is
[8] markedly elevated."

[9] Q: So my question again was you were
[10] recommending blood testing of two groups?

[11] A: I made the recommendation I just read,
[12] yes.

[13] Q: I guess I'm just trying to figure out is
[14] there something different from what I'm saying which
[15] is blood testing versus the way you're reading it?

[16] A: You were taking it a little bit out of
[17] context and by reading it all in there together we
[18] got it in the proper context.

[19] Q: And what proper context is that?

[20] A: The way it's written on the paper, where
[21] the recommendation was made.

[22] Q: So this is the best reflection here, what
[23] was —

[24] A: This is the proper context of what was
[25] written.

1—04:08:46 25—04:09:53

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[1] Q: Okay. Now, why were you making a
[2] recommendation to test employees with potential
[3] exposure to the fluorochemicals?

[4] A: I think the letter stands for itself. If
[5] you'd like, I'll read the whole letter —

[6] Q: I'm just asking for your recollection of
[7] why you made a recommendation to test employees for
[8] exposure to fluorochemicals?

[9] A: The first sentence starts off "3M has
[10] reported finding FC-143 plus other unidentified
[11] fluorochemicals in the blood of potentially exposed
[12] workers." And then it goes on, "similar tests have
[13] not been done on the general population and medical
[14] division recommends the following with jobs with
[15] potential exposure to Telomer A," and that's Number
[16] 5. And the main reason was to see if our employees
[17] were showing the same thing that 3M employees had
[18] shown.

[19] Q: And, in fact, the statement here that 3M
[20] has reported finding FC-143 plus other unidentified
[21] fluorochemicals in the blood of potentially exposed
[22] workers, we also had information about the general
[23] population blood levels, correct?

[24] MR. GREEN: Object to the form.

[25] Q: (By Mr. Bilott) Not just in 3M workers at

1—04:09:56 25—04:11:02

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[1] the time?

[2] MR. GREEN: Object to the form.

[3] THE WITNESS: In that first paragraph,
[4] similar tests have not been done on the general
[5] population.

[6] MR. BILOTT: Let's mark this.

[7] (Plaintiffs' Exhibit 11 was marked
[8] for identification.)

[9] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[10] hand you what's been marked as Exhibit 11 and ask you
[11] to take a moment to look at that, and you'll notice
[12] that it's a March 15, 1979 document so it's a cc to
[13] you at the top. Do you see that?

[14] A: Yes.

[15] Q: And it's entitled Chambers Works
[16] Fluorosulfactant Study. Do you see that?

[17] A: Yes.

[18] Q: And attached to this document on the
[19] third — actually it's the attachment after the
[20] letter. There's charts summarizing the data that was
[21] available at the time with respect to organic
[22] fluorine in blood. Do you see that?

[23] A: Yes.

[24] Q: Do you see the reference, 3M data, right
[25] below that, general population, a hundred and six, do

1—04:11:06 25—04:12:16

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[1] you see that?

[2] A: Yes.

[3] Q: Do you recall that the article we looked
[4] at from Taves and Grey, it specifically referenced a
[5] hundred and six samples from the general population?

[6] A: Is that a question?

[7] Q: Do you recall that's the general
[8] population data referenced here?

[9] A: I don't know whether it's the same data.
[10] I know it's the same number, but it doesn't say that
[11] this comes from Taves' group.

[12] Q: Are you aware of any other sampling of
[13] organic fluoride in the general population blood from
[14] a hundred and six people that was available to
[15] Du Pont in 1978 — or '79?

[16] A: No, I don't.

[17] Q: What do you understand to be referenced on
[18] this chart that was given to you in 1979 with respect
[19] to general population, a hundred and six, parts per
[20] million organic fluorine?

[21] A: Just what the document says, just parts
[22] per million of organic fluorine varied from .002 to
[23] .13.

[24] Q: In general population samples?

[25] A: According to that note, yes.

1—04:12:17 25—04:13:49

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[1] Q: Knowing that there was not only blood data
[2] from 3M workers as referenced below that in that same
[3] chart that you see under 3M data under general
[4] population, there's also data referenced from plant
[5] workers, et cetera, do you see that?

[6] A: Yes.

[7] Q: So knowing that there was data available
[8] with respect to not only 3M workers blood levels but
[9] also general population blood levels, what steps did
[10] Du Pont take to investigate further, if at all, the
[11] level of organic fluorine in general population blood
[12] supplies?

[13] MR. GREEN: Is there a time frame?

[14] MR. BILOTT: At this time, 1979.

[15] THE WITNESS: First it was evaluated by
[16] Sid Pell, Dr. Sidney Pell, who was the manager
[17] of epidemiology who determined what was the
[18] statistical validity or lack thereof of the data
[19] that we had, and then he was pointing out some
[20] things that he noticed in there and then he went
[21] on to explain that "explanations for these
[22] differences cannot be found from the available
[23] data. It would be helpful to find out what
[24] specific diagnosis within these general
[25] categories accounted for the differences between

1—04:13:51 25—04:15:10

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[1] the two groups." And then so continued
[2] surveillance would be advisable is his last
[3] comment.

[4] Q: (By Mr. Bilott) Based on the information
[5] you had that there was C-8 being detected in 3M
[6] worker blood, you made a recommendation to test
[7] Du Pont workers, right?

[8] A: That's correct, it's in the previous —

[9] Q: Knowing that this material was also in
[10] general population blood, why was there no
[11] recommendation made to follow up and do further
[12] testing of general population blood?

[13] A: At that point in time we were trying to
[14] determine if it was in the blood of our workers who
[15] would have the highest potential exposure to the
[16] material in the workplace.

[17] Q: What disclosures did Du Pont make to
[18] anyone with respect to the data showing C-8 in
[19] general population blood?

[20] A: I don't recall Du Pont making any
[21] disclosure as far as that because the general
[22] population data was already in the published paper
[23] that you showed me earlier, the Taves paper and 3M —
[24] reference here to 3M was based upon that, according
[25] to your summarization of it. So I don't see any — I

1—04:15:13 23—04:16:18

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[1] don't think Du Pont had any reason to do anything
[2] right then until we got some more data.

[3] Q: And again what data did Du Pont have at
[4] that time in 1979 to inform Du Pont as to what, if
[5] any, safe level existed for having C-8 in human
[6] blood?

[7] A: I don't think we had any data that told us
[8] what was safe or what was not safe. We just had some
[9] data that was showing us that C-8 was in the blood
[10] and we were undertaking then a pretty extensive
[11] program to try to determine exactly what that did
[12] mean and what was the significance of it.

[13] Q: Did you have any knowledge indicating that
[14] any copy of the 1976 article from Taves had ever been
[15] given to U.S. EPA by anybody?

[16] A: I didn't have any knowledge that it did.
[17] I didn't have any knowledge that it didn't. It was a
[18] published paper out in the published literature.

[19] Q: Why not err on the side of making sure EPA
[20] had that information?

[21] MR. GREEN: Object to the form.

[22] THE WITNESS: What would be the reason for
[23] that? It was a published paper out in the
[24] public domain that EPA had signed, reviewed the
[25] literature.

1—04:16:20 25—04:17:20

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[1] They know everything that's coming out and
[2] published. There would not have been any reason
[3] whatsoever to go back and send that paper to the
[4] EPA because it didn't really say anything that
[5] EPA could use if they hadn't already picked it
[6] up by their own scientists.

[7] Q: (By Mr. Bilott) You had no information
[8] indicating that EPA was aware of that document?

[9] A: No, but I don't know that they weren't
[10] either.

[11] Q: Yet with getting that information, Du Pont
[12] went ahead and recommended sampling of its employees,
[13] correct?

[14] A: Yes.

[15] Q: And, in fact, you made recommendations to
[16] actually look into the health records for those
[17] employees, correct?

[18] A: Yes.

[19] Q: Because there wasn't much information
[20] available to Du Pont at that time confirming what the
[21] safe levels of exposure were for C-8, was there?

[22] A: We had no reason to think that these
[23] employees' health had been harmed at all by any
[24] exposure to C-8, but as we discussed this morning,
[25] based upon our intent to try to do appropriate —

1-04:17:24 25-04:18:29

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[1] provide an appropriate safe and healthful workplace
[2] we wanted to make sure we knew exactly what were the
[3] circumstances, what were the fluorochemical levels in
[4] our employees' blood and if in fact they had any
[5] health effects that could be related to these. We
[6] had no reason to think they did but we wanted to err
[7] on the side of prudence and look and see if they did.

[8] Q: And, in fact, you say that you had no
[9] evidence indicating there was a health problem, you
[10] also had no evidence though indicating there wasn't,
[11] correct?

[12] A: That is correct, but you have to — every
[13] Du Pont employee got a physical examination on a
[14] regular basis. If they were 40 years of age or
[15] under, they got one every two years, which included
[16] liver function tests, a complete exam by a physician,
[17] chest x-ray, urinalysis, and any other test that
[18] might have been indicated.

[19] If they were over 40 years of age, they
[20] got one every year, exactly the same thing, plus they
[21] got an electrocardiogram every year.

[22] We were able to monitor employee health by
[23] doing this on a regular basis, physicians at the
[24] plant sites, and then we could look and see if there
[25] were any abnormalities that were showing up.

1-04:18:30 25-04:19:52

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[1] We also had an epidemiologic database in
[2] which we picked up any type of illness that an
[3] employee may have for which they lost eight days of
[4] work or more or anything that an employee or a
[5] pensioner might die from. This was entered into our
[6] epidemiologic database and periodically about every
[7] two years we would run that database and see if we
[8] had a plant site that was showing any abnormality and
[9] causes of death or adverse health effects that might
[10] be showing up. Plus we had the physical exams that
[11] the physicians were looking at.

[12] And so we had a pretty good way to make
[13] sure that our employees did not have a clustering of
[14] cases of some type of adverse health effects.

[15] But once we got these data that you
[16] reference here from 3M, then we felt that we needed
[17] to increase that surveillance a little bit to make
[18] sure we weren't missing something but we were already
[19] doing a pretty extensive surveillance program.

[20] Q: So you made a recommendation to begin some
[21] blood testing of Du Pont employees who had the
[22] potential to be exposed, correct?

[23] A: May I see the document again, please? I
[24] made the recommendation that we obtain blood
[25] fluorochemical levels on representative employees

1-04:19:54 25-04:21:02

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[1] with various potentials for exposures to various
[2] fluorochemicals and that would be done at the same
[3] time as the employees' periodic physical examination.

[4] Q: And how — what was your understanding as
[5] to how the employees would be identified as far as
[6] determining whether they had potential for exposure?

[7] A: By their work assignment, where in the
[8] plant they worked, if they worked in a plant
[9] assignment in which there would have been a potential
[10] for exposure to fluorochemicals.

[11] Q: And how would you determine the potential
[12] for exposure, whether the stuff is — whether the
[13] particular chemical is emitted into the air or water
[14] from that particular process?

[15] A: Whether it was in the workplace in that
[16] particular work area that they worked in.

[17] Q: So the determination of whether there was
[18] exposure was based on the amount of the chemical
[19] potentially in that work environment?

[20] A: No. It was based upon whether or not the
[21] chemical was being used in that work environment.

[22] Are you through questioning me on this one
[23] (indicating)?

[24] Q: Yes. Thank you.

[25] When Du Pont eventually notified its

1-04:21:25 25-04:22:48

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[1] employees of the data that had become available to
[2] the company with respect to C-8 being found in human
[3] blood, why did Du Pont only reference the finding of
[4] C-8 in 3M worker blood and not the general population
[5] blood?

[6] A: I don't know that we only did that.

[7] MR. BILOTT: Mark that.

[8] (Plaintiffs' Exhibit 12 was marked
[9] for identification.)

[10] Q: (By Mr. Bilott) Dr. Karrh, I've handed
[11] you what's been marked as Exhibit 12 and you'll
[12] notice this particular document is dated June 27th,
[13] 1978, going from a C.H. Foshee?

[14] A: Foshee.

[15] Q: To all division superintendents and it's
[16] referencing fluorosulfactants announcement. Quote,
[17] "attached is a communications package pertaining to
[18] the presence of organic fluorine in the blood of 3M
[19] workers." Do you see that?

[20] A: Yes.

[21] Q: And if you take a moment to look at the
[22] second page which is the June 27th, 1978 document
[23] entitled Fluorosulfactants in Blood, take a moment to
[24] read the first paragraph. You'll notice there
[25] there's only a reference to having found C-8 in 3M

1—04:22:55 24—04:24:16

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[1] worker blood.

[2] A: May I look back at the last two documents?

[3] Q: Sure.

[4] A: The time references on these are such that
[5] at that point in time we did not have good data to
[6] show if the Du Pont employees working in the
[7] fluorochemical areas have higher blood fluorochemical
[8] levels than other employees because if you look at
[9] the Du Pont data and the Chambers Works data they
[10] were the same essentially, the same results.

[11] Q: I think what I'm getting at though is —
[12] the question I was asking was in this particular
[13] announcement here in 1978 there's a reference only to
[14] having found C-8 in 3M worker blood and what I'm
[15] asking is do you know why there's no reference in
[16] this particular communication to general population
[17] blood levels?

[18] MR. GREEN: Could we read back the
[19] witness's last answer, please, because I think
[20] he might have misspoke.

[21] MR. BILOTT: Are you objecting to his
[22] answer?

[23] MR. GREEN: No. I'm asking that his last
[24] answer be read back because I think it answered
[25] the question you just asked. I think it was

3—04:24:31 25—04:25:33

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[1] intended to answer the question you just asked.

[2] Q: (By Mr. Bilott) Well, let me just ask
[3] you. Do you understand the question I just asked?

[4] A: I've forgotten it.

[5] Q: Okay. Let me ask it again. Maybe that's
[6] the quickest way to do it. What I'm asking is do you
[7] have an understanding as to why there was no
[8] information provided in this communication to Du Pont
[9] employees in 1978 concerning the amount of C-8 that
[10] had been found in general population blood as opposed
[11] to telling the workers about 3M worker blood?

[12] A: In the first place, at that time we didn't
[13] have good data on Du Pont employees' blood because I
[14] had just sent that recommendation out June the 16th
[15] and this is June the 27th, so we couldn't tell them
[16] about Du Pont worker C-8 levels in the blood.

[17] The second place is at that time we were
[18] trying to communicate to employees what we were
[19] planning to do as far as their health protection was
[20] concerned and that we'd be taking blood samples from
[21] them to determine whether or not they may have had
[22] C-8 in their blood, and it had nothing to do at that
[23] point in time with the general population.

[24] Q: I'm not sure if you understood my
[25] question. I'm not asking why you didn't advise

1—04:25:36 25—04:26:32

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[1] Du Pont employees of Du Pont blood levels. I'm just
[2] asking do you know why there was no mention of the
[3] fact that this material had been found in general
[4] population blood?

[5] A: I think I just answered that. I'll be
[6] glad to answer it again. We were trying with
[7] communication to inform employees that we were going
[8] to be doing some surveillance on them to see if they
[9] had fluorosulfant, C-8, in their blood since 3M
[10] had reported that their workers had it in their
[11] blood.

[12] At that point in time we were not trying
[13] to advise the general population about this because
[14] we didn't have enough data to advise the general
[15] population. We were not going to effect the general
[16] population.

[17] We were going to be drawing blood from our
[18] own employees to try to answer the question whether
[19] or not they had C-8 in their blood and so, therefore,
[20] we were trying to inform employees what we were
[21] doing. This was our program to keep employees
[22] informed of what was going on.

[23] Q: I think I understand your response now and
[24] I think what you're saying though is that because of
[25] that, the focus being on getting through Du Pont

1—04:26:35 25—04:28:00

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[1] worker blood, you didn't see — Du Pont didn't see
[2] information about general population blood being
[3] relevant in that context?

[4] A: At that point in time we didn't have
[5] reason to think that the general population blood
[6] level would be higher than our workers who were
[7] working directly with the chemical.

[8] We were going to get the blood levels of
[9] our workers working directly with the chemical and
[10] see what it showed and then from there we could
[11] determine if we needed to do anything further with
[12] the general population.

[13] People who were working directly with the
[14] chemical would have had a greater exposure potential
[15] to the chemical than would anybody in the general
[16] population.

[17] Q: And, in fact, as part of the Du Pont work
[18] to try to obtain Du Pont worker blood levels, Du Pont
[19] made a decision to try to obtain what it was going to
[20] call background levels by testing Wilmington,
[21] Delaware employees, correct?

[22] A: That's correct.

[23] Q: Why not just use the background general
[24] population data that was already available?

[25] A: You're referring to the Taves article?

1—04:28:02 25—04:29:32

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[1] Q: Yes.

[2] A: The reason would be that we wanted to use
[3] the same analytical technique, the same — exactly
[4] the same procedure for collecting samples from our
[5] employees on the plant as we would use for collecting
[6] samples from general population, and we wanted to be
[7] able to pick people that we knew would not have had
[8] exposure from a plant site exposure to
[9] fluorochemicals. So that's why we chose to do it
[10] that way, principally to use the same exact
[11] analytical technique.

[12] Q: If we can refer back to Exhibit 10 for a
[13] moment, there's a reference there to your
[14] recommendation to look at employees who were exposed
[15] to Telomer A. Do you see that?

[16] A: Yes.

[17] Q: Why Telomer A?

[18] A: I have to admit I have forgotten exactly
[19] why the Telomer A except perhaps that's the
[20] information that I was getting as far as what type of
[21] FC-143 we were using on a particular plant site but I
[22] don't recall specifically why I put Telomer A in
[23] there.

[24] Q: But it was your understanding at that time
[25] at least that employees working with Telomer A would

1—04:29:36 25—04:32:17

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[1] have the potential for being exposed to C-8?

[2] A: It was my understanding that Telomer A was
[3] in the fluorochemical family, and whether it was C-8
[4] or not I don't recall at this point in time.

[5] MR. BILOTT: Can we mark this one.
[6] (Plaintiffs' Exhibit 13 was marked
[7] for identification.)

[8] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[9] hand you what's been marked as Exhibit 13 and ask you
[10] to take a moment to look at that and tell me if you
[11] can identify what that is.

[12] Let me rephrase the question. Do you
[13] recognize this document as containing your
[14] recommendations for a medical surveillance program
[15] for Du Pont employees exposed to C-8 chemicals?

[16] A: This document is from R.M. Shepherd to
[17] W.A. Bower at Washington Works, which is Parkersburg,
[18] dated August 9, 1978, entitled Medical Surveillance
[19] Programs.

[20] He references an attached letter from me
[21] of August the 3rd. And my attached letter of August
[22] the 3rd was addressed to R.M. Shepherd by me and it
[23] was titled C-8 Exposure, Washington Works, Medical
[24] Surveillance Program.

[25] And then attached to that, which I had

1—04:32:19 25—04:33:37

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[1] attached, was from me to F.E. French. It's talking
[2] about medical examinations for fluorochemical
[3] workers. There was a — I'm sorry. That was a July
[4] 24, '78 letter which also had attached to it the
[5] previous document we looked at which was a June 16,
[6] '78 letter to F.E. French from me.

[7] Q: Let me state the question again. This
[8] particular exhibit, Exhibit 13, do you recognize it
[9] as including your August 3, 1978 recommendations for
[10] a medical surveillance program for Du Pont workers
[11] exposed to C-8 with some attachments to it?

[12] A: At the Washington Works plant, yes.

[13] Q: And the Washington Works plant is the
[14] Washington Works plant of Du Pont in Wood County,
[15] West Virginia. Correct?

[16] A: It's in Parkersburg. I don't know if
[17] that's Wood County or not, Parkersburg, West Virginia

[18] Q: Okay. You had recommended in connection
[19] with the blood testing that medical records be
[20] reviewed for the potentially exposed employees,
[21] correct?

[22] A: Yes.

[23] Q: Do you recall what the results of the
[24] medical record reviews were?

[25] A: No, I don't specifically.

1—04:33:39 25—04:35:07

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[1] Q: Do you recall there being some findings of
[2] elevated liver enzyme results among the Du Pont
[3] Washington Works workers and Du Pont Chambers Works
[4] employees?

[5] A: I would have to see a document on that. I
[6] don't recall specifically that.

[7] MR. BILOTT: Mark that.

[8] (Plaintiffs' Exhibit 14 was marked
[9] for identification.)

[10] Q: (By Mr. Bilott) Dr. Karrh, I've just
[11] handed you a document marked as Exhibit 14 and ask
[12] you to take a moment to look at this and tell me if
[13] you identify this as a Du Pont-generated memo from
[14] September 1978, including information with respect to
[15] a medical file — medical record review of employees
[16] exposed to C-8 at the Washington Works plant?

[17] A: Well, it's titled — it's from W.A. Bower
[18] to J.C. Leitingner and M.S. Eaton and it's titled C-8
[19] Exposure, Medical Surveillance.

[20] The cover letter, second paragraph —
[21] first paragraph, the last sentence says attached is a
[22] summary of Dr. Power's review, referring to the
[23] review of the medical records of plant employees.
[24] The second paragraph, "although Dr. Power has found
[25] no unusual health problems in this group, we are

1—04:35:09 24—04:36:11

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[1] disturbed by the frequency of borderline elevated
[2] liver function. Dr. Power talked with Waynesboro's
[3] plant doctor about DMF exposure and liver function
[4] results," and so forth and so on.

[5] So obviously Dr. Power had found some
[6] elevated liver function — borderline elevated liver
[7] function tests and he planned to take duplicate
[8] samples on some of the borderline cases.

[9] Then on the back side of that is a letter
[10] from Dr. Power to W.A. Bower which apparently is one
[11] that's referenced in this because it's eight days
[12] prior, and in that Dr. Power says "I do not believe
[13] any of these," talking about a variety of illnesses,
[14] "are caused by exposure to C-8. Some of the
[15] illnesses found are two heart attacks and five
[16] employees with high blood pressure."

[17] And on down, "minor elevations of many
[18] blood tests did occur in larger-than-anticipated
[19] numbers and are listed separately. With the
[20] exception of one person, all of the elevations were
[21] borderline and not indicative of disease. One of the
[22] liver function tests is most frequently elevated in
[23] the operator group. However, no liver diseases were
[24] found. Many of the laboratorians also work with
[25] Perclene, which is a known hepatotoxin. In

2—04:36:14 25—04:37:18

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[1] conclusion, I could find no unusual health problems
[2] occurring in the group of people studied with the
[3] exception of borderline elevation of liver function
[4] tests. Since it has been previously determined that
[5] C-8 is a hepatotoxin, it is possible that C-8 may be
[6] causing very minimal, and certainly not clinically
[7] apparent, toxic effects to the liver."

[8] Q: Maybe we can speed things along here
[9] today. My questions are not asking you to read back
[10] to me the documents I'm giving you. I'm asking for
[11] your understanding of the document.

[12] If you need to take a moment to read it to
[13] yourself to answer my question, that's fine. But my
[14] question was to you do you recognize this document as
[15] setting out some results of a medical file review of
[16] employees exposed to C-8 at the Washington Works
[17] plant?

[18] MR. GREEN: Well, I object to the
[19] cautionary instruction. He has to answer as
[20] best he can to the questions. If you want to
[21] sharpen up the questions, that's fine.

[22] MR. BILOTT: If the witness doesn't want
[23] to answer my questions and prefers to read the
[24] document back to me, I do have a problem with
[25] that.

1—04:37:18 25—04:38:08

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[1] MR. GREEN: The witness is answering your
[2] question.

[3] MR. BILOTT: I disagree and I think we
[4] should move on.

[5] Again my instruction would be, for the
[6] purposes of moving forward with the deposition,
[7] I'm not asking Dr. Karrh to read the documents
[8] back to me that I'm handing to him. My
[9] questions, and if they aren't clear, please let
[10] me know, is asking you what your understanding
[11] of what's in the document, if my
[12] characterization of it is correct or not.

[13] If you need to read it to yourself, that's
[14] fine, but we're going to be here a lot longer if
[15] in response to my questions you simply read back
[16] everything on the paper.

[17] MR. GREEN: Well, I don't think it's
[18] appropriate to hand a man a document with a
[19] bunch of attachments, a document that he didn't
[20] even author and I'm not clear that he ever even
[21] received and say what's your understanding of
[22] it —

[23] MR. BILOTT: I don't need your speaking
[24] objections.

[25] MR. GREEN: Well, if you get to make

1—04:38:10 25—04:38:57

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[1] speaking explanations, I get to make speaking
[2] responses.

[3] MR. BILOTT: Mr. Karrh has already
[4] testified that he has spent three days reviewing
[5] documents in preparation for the deposition. I
[6] don't think it's fair to say that he is being
[7] somehow surprised at being shown documents —

[8] MR. GREEN: I'm saying showing him a
[9] document that he didn't ever receive and he
[10] didn't author and ask him what is it, you can't
[11] be surprised that he reads it back to you —

[12] MR. BILOTT: Let me ask the witness —

[13] MR. GREEN: Ask better questions, you'll
[14] get answers maybe you'll like better.

[15] MR. BILOTT: Now that we've instructed
[16] Dr. Karrh how to testify —

[17] MR. GREEN: I haven't said a word about
[18] that.

[19] Q: (By Mr. Bilott) Let me simply ask you, if
[20] you need time to review the document first in order
[21] to answer my question, just let me know and I'll be
[22] more than happy to give you time to read the
[23] document. Now, let's ask the question again —

[24] A: Back to your comment though on the
[25] question you asked me on this, the reason I chose to

1—04:38:58 25—04:39:46

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[1] read that, you asked your question in such a way that
[2] had I answered it the way you wanted it answered, it
[3] would have been totally out of context.

[4] What I was trying to do was put the answer
[5] into the proper context, which was the only way I
[6] could do it then was to read the document into the
[7] record for the context to make sure because you were
[8] taking it totally out of context the way you asked
[9] the question.

[10] Q: Does this document not set forth initial
[11] results from medical file review at Washington Works,
[12] West Virginia?

[13] A: I think I've read that into the record.
[14] I'll be glad to read it again —

[15] Q: Yes, it does, correct?

[16] A: I'll be glad to read it in there again if
[17] you'd like.

[18] Q: Am I missing something? The answer — let
[19] me rephrase the question. You understand this
[20] document; you just read it to me?

[21] A: You cut me off before I could finish all
[22] of it.

[23] Q: Well, let me just ask the question so I
[24] can hopefully get an answer. This document indicated
[25] borderline elevated liver function results among the

1—04:39:51 25—04:41:00

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[1] records reviewed at Washington Works, correct?

[2] A: That's exactly what I read into the
[3] record.

[4] Q: Okay. Thank you. I'd like to show you
[5] the next document I've already handed —
[6] (Plaintiffs' Exhibit 15 was marked
[7] for identification.)

[8] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[9] hand you what's been marked as Exhibit 15 and ask you
[10] to take a moment to look at this document. First of
[11] all, tell me if you recall ever seeing this document.

[12] A: Yes, I've seen it.

[13] Q: This is a document you authored, correct,
[14] in December of 1978?

[15] A: Yes.

[16] Q: And in this document you're providing a
[17] summary of the health effects seen among the Chambers
[18] Works, New Jersey fluorosulfactant workers, correct?

[19] A: I'm sending a letter to Pat Gilby who was
[20] with the department that ran Chambers Works, New
[21] Jersey plant. The title of it is Chambers Works
[22] Fluorosulfactant Study, dated December 22nd, 1978, in
[23] which I do summarize what Dr. Sidney Pell, our chief
[24] epidemiologist, had said about the study that he had
[25] reviewed.

1—04:41:00 25—04:42:00

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[1] Q: And in that summary you mention there
[2] "there does not seem to be any adverse health effects
[3] reported in this study with the possible exception of
[4] an effect on the liver," correct?

[5] A: That's what the sentence says, yes, sir.

[6] Q: And so by December of 1978 there was
[7] information available to Du Pont indicating liver —
[8] potential liver effects in both the Washington Works
[9] workers and the Du Pont Chambers Works workers
[10] exposed to fluorosulfactants, correct?

[11] A: There were data that indicated that some
[12] of the workers who had these exposures had some
[13] abnormal — borderline abnormal liver functions
[14] tests.

[15] We did not have any data at that point in
[16] time that showed us what it was due to. What we were
[17] trying to do was to find out what it was due to and
[18] to continue doing the type of surveillance we had
[19] been doing.

[20] Q: So what was specifically done by Du Pont
[21] medical to figure out why you were seeing these
[22] particular liver effects?

[23] A: I'll be glad to read what I recommended in
[24] this document you just gave me —

[25] Q: As opposed to what was recommended — I'm

1—04:42:02 25—04:42:49

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[1] just asking for your recollection, what was done to
[2] follow up on these liver —

[3] A: My recollection is what was written down
[4] here.

[5] Q: You have no independent recollection of
[6] what was done?

[7] A: Why would I?

[8] Q: Weren't you responsible —

[9] A: And I put my recommendations in writing.
[10] I'll be glad to read them into the record if you'd
[11] like for me to. The recommendations are right here
[12] in the letter.

[13] Q: I'm not asking about the recommendations.
[14] I'm asking what you remember actually being done.

[15] A: What was being done was what was
[16] recommended be done.

[17] Q: So all the recommendations were —

[18] A: "For liver function tests, data should be
[19] tabulated to show the number of persons, not the
[20] number of tests, in each group with abnormal results.
[21] Blood sugars should be tabulated the same way, taking
[22] the diabetics into account. To summarize, neither
[23] Dr. Pell nor I see any adverse health effects
[24] reported in this study. However, we would like to
[25] see the liver function tests tabulated to compare the

1—04:42:51 25—04:43:58

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[1] number of persons in each group rather than the
[2] number of tests, as well as the other requests noted
[3] above."
[4] Q: Was there a follow-up study done of either
[5] the Washington Works employees or the Du Pont
[6] Chambers Works employees to get more data about the
[7] liver effects?

[8] A: As I've testified earlier, employees at
[9] both plants got regular physical examinations in
[10] which liver function tests were done, every employee,
[11] secretaries, fluorosulfactant workers, plant manager,
[12] everybody else, every two years if they were 40 and
[13] under, every year if they were over 40.

[14] Those results were looked at to determine
[15] whether or not they showed abnormalities or whether
[16] or not there was any clustering of abnormalities.

[17] Q: I guess what I've asked specifically
[18] though is do you remember a specific study being done
[19] to follow up on liver effects within either the
[20] Du Pont Washington Works plant or the Du Pont
[21] Chambers Works plant to figure out whether any of
[22] this was related specifically to C-8?

[23] A: I don't recall specifically but I'm sure
[24] you have a document that you'll show me that will
[25] tell me whether it was or not.

1—04:43:58 25—04:45:43

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[1] Q: So you have no recollection —

[2] A: I don't have any personal recollection
[3] right now twenty — getting close to 26 years ago.

[4] Q: Do you recall at any point in time after
[5] the initial liver data was coming back from the
[6] Washington Works plant and the Chambers Works plant
[7] sitting down and deciding at that point whether to
[8] file any sort of formal notice with the U.S. EPA
[9] about the effects?

[10] A: How about asking your question again. I'm
[11] not sure that I caught the first part of it.

[12] Q: In 1979 after this data was being
[13] generated showing the elevated liver effects in
[14] certain employees at the Washington Works plant and
[15] the Chambers Works plant, do you recall sitting down
[16] and looking into the issue of whether any of that
[17] information should be reported to U.S. EPA under TSCA
[18] 8(e)?

[19] A: I don't recall that we did. I don't
[20] recall that we didn't.

[21] MR. BILOTT: Mark that.
[22] (Plaintiffs' Exhibit 16 was marked
[23] for identification.)

[24] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[25] hand you a document marked Exhibit 16 and ask you to

1—04:45:49 25—04:46:42

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[1] take a moment to look at that and you'll notice
[2] there's a — on the cc, it's up at the top, your name
[3] is on that list. Do you see that?

[4] A: Yes.

[5] Q: Take a moment to look at this and tell me
[6] if you recall — if you can identify what this is.

[7] A: This is a letter from Lance Percival to
[8] Walt Raines, dated July 18, 1979, titled Minutes,
[9] Review of Preliminary Data, Organic Fluorine Levels
[10] in Blood, Washington Works.

[11] Q: And you see the received stamp there with
[12] your name?

[13] A: Yes.

[14] Q: And there's some looks like handwriting in
[15] there?

[16] A: Yes.

[17] Q: And is that, as you mentioned before,
[18] indicative of the fact that you actually saw and
[19] reviewed this?

[20] A: Yes, and in fact the handwritten note at
[21] the top is my writing.

[22] Q: And what does that say?

[23] A: File fluorochemicals in blood.

[24] Q: In this particular memo that you received
[25] back in '79 there's a reference here to a meeting

1—04:46:45 25—04:47:52

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[1] with 3M Company planned for July 20th. Do you see
[2] that?

[3] A: Yes.

[4] Q: On the first page?

[5] Do you know why Du Pont was meeting with
[6] 3M in 1979 dealing with the blood tests?

[7] A: I think that letter is very
[8] self-explanatory. It says a meeting is planned with
[9] 3M Company on 7/20 to review any new 3M data and
[10] results from blood tests run at Chambers Works.

[11] Q: Let me ask it this way. Why was Du Pont
[12] sharing that information with 3M? Is that because 3M
[13] was supplying the C-8 to Du Pont?

[14] A: 3M was supplying the C-8 to Du Pont.
[15] Du Pont was buying it from 3M. Because we both
[16] handled the material and we both had seen the
[17] material in the blood of employees, we were trying to
[18] work together on it to make sure we learned from them
[19] and they learned from us, so if they got something
[20] new that we needed to know, they would tell us; if we
[21] got something new they needed to know, we would tell
[22] them.

[23] It was actually trying to be cooperative
[24] with each other to make sure that we were doing the
[25] best job we could do in assuring that we were

1-04:47:52 25-04:49:00

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[1] providing a safe and healthful workplace.
[2] Q: On the second page there's a heading
[3] "Medical Follow-up, Dr. B. Karrh will review data
[4] summarized in Reference 2 directly with Dr. Power and
[5] request additional medical analyses as needed." Do
[6] you see that?
[7] A: Yes.
[8] Q: And you understand that is a reference to
[9] you reviewing what is referenced on the first page as
[10] the letter from Dr. Power to W.A. Bower of 9/20/78,
[11] correct?
[12] A: Yes.
[13] Q: And that is, in fact, the second page of
[14] Plaintiff's Exhibit 14, correct, Reference 2?
[15] A: That's the letter to which it refers, yes.
[16] Q: And do you recall requesting additional
[17] medical analysis?
[18] A: I recall talking with Dr. Power just about
[19] the fact that we had this information. I don't
[20] recall specifically where we came out on that after
[21] those discussions but the follow-up that says here
[22] that I would discuss it with Dr. Power, and I did.
[23] Q: And Dr. Power was the plant doctor for
[24] Washington Works, correct?
[25] A: That's correct.

1-04:49:01 25-04:49:57

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[1] Q: And was he the plant doctor the entire
[2] time you were employed at Du Pont, plant doctor for
[3] Du Pont Washington Works?
[4] A: Yes.
[5] Q: You notice the last heading here on this
[6] exhibit references notification of EPA; do you see
[7] that?
[8] A: Yes.
[9] Q: "The substantial risk committee will
[10] review next week to decide if a report under 8(e) is
[11] required. This will also be discussed with 3M." Do
[12] you see that?
[13] A: Yes.
[14] Q: Did you know who was on the substantial
[15] risk committee?
[16] A: I knew at the time, yes. I couldn't tell
[17] you now who it was.
[18] Q: Were you on it?
[19] A: I don't know if I was or not.
[20] Q: Do you know why such a report would be
[21] discussed with 3M?
[22] A: Because if 3M was going to file such an
[23] 8(e) report, there wouldn't be any need for Du Pont
[24] to; if Du Pont was going to, there wouldn't be a need
[25] for 3M to. So it was trying to make sure again, as I

1-04:50:01 25-04:51:22

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[1] said earlier, to be cooperative and try to learn from
[2] each other.
[3] MR. BILOTT: Mark this.
[4] (Plaintiffs' Exhibit 17 was marked
[5] for identification.)
[6] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[7] hand you what's been marked as Exhibit 17 and ask you
[8] to again take a moment to look at that and tell me if
[9] you identify this as a document that you received
[10] July 24th of 1979, regarding a discussion of
[11] fluorochemicals with 3M?
[12] A: Yes, it is.
[13] Q: And this was a document generated during
[14] the normal course of business at Du Pont?
[15] A: Yes. It's a document generated by Blane
[16] McKusick to F.E. French, Jr., titled Discussion of
[17] Fluorochemicals with 3M. It's dated July 23rd, 1979.
[18] Q: On the second page of this document
[19] there's a table on the top and below that there's a
[20] reference to "3M got blood samples from eight
[21] peasants in a Chinese village." Then there's another
[22] reference there in the e.g., "3M found" and it gives
[23] some numbers, "in the hundred and six members of the
[24] general U.S. population." Do you see that?
[25] A: Uh-huh.

1-04:51:23 25-04:52:37

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[1] Q: Again do you know why 3M was discussing
[2] finding the organic fluorine levels referenced there
[3] in the general U.S. population with Du Pont?
[4] A: I think this goes back to what I've
[5] answered several times. Du Pont and 3M had a
[6] customer and supplier relationship. We were both
[7] developing data that pertained to this chemical.
[8] We were both trying to be cooperative with
[9] each other so that we could learn from each other and
[10] make sure that we weren't reinventing the wheel or
[11] they weren't or we weren't going off in totally
[12] different directions. So if they got data, they
[13] shared it with us. If we got data, we shared it with
[14] them.
[15] It was just a way to make sure we were
[16] getting the maximum amount of data that we could get
[17] to make sure we were providing a safe and healthful
[18] workplace.
[19] MR. BILOTT: Mark this.
[20] (Plaintiffs' Exhibit 18 was marked
[21] for identification.)
[22] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[23] hand you what's been marked as Exhibit 18 and ask you
[24] if you can identify what that is.
[25] And let me state for the record that the

1—04:52:42 25—04:53:41

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[1] pages attached to the cover page in Exhibit 18
[2] reference information that I assume should be stamped
[3] confidential but were produced to us by Du Pont
[4] without that stamp but I would assume it should be.

[5] MR. GREEN: It looks like it should be and
[6] that was an oversight and we should make this
[7] portion of the transcript confidential, and if
[8] you're going to ask about this data, then we
[9] should make this document confidential.

[10] MR. BILOTT: I guess just to clarify, I
[11] would agree that the pages of the exhibit other
[12] than the first page would be marked confidential
[13] and to the extent I get into, and I don't plan
[14] to, any discussion of the individual data, that
[15] that would be confidential, but discussion
[16] generally of the document I don't think should
[17] be.

[18] MR. GREEN: I agree with that.

[19] Q: (By Mr. Bilott) Dr. Karrh, do you
[20] recognize what this document is?

[21] A: Yes. This is a July 23rd, 1979 letter to
[22] me from Dr. Power at Parkersburg titled Organic
[23] Fluorine in Blood. It has my stamp on it, although
[24] it doesn't have my initial in it.

[25] Q: Why was Dr. Power at Washington Works

1—04:53:43 25—05:00:17

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[1] sending this type of data directly to you?

[2] A: This was a follow-up that we discussed
[3] earlier on one of the earlier documents that I told
[4] you that Dr. Power and I discussed it and I didn't
[5] remember exactly what the outcome was and this
[6] answered that question for me.

[7] Q: So this is the follow-up data?

[8] A: Yes.

[9] (A recess was taken)

[10] (Plaintiffs' Exhibit 19 was marked
[11] for identification.)

[12] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[13] hand you what's been marked as Exhibit 19 and ask you
[14] to take a moment and look at that and tell me if you
[15] identify this as a document you received during the
[16] course of your employment at Du Pont, summarizing
[17] information available on organic fluorocompounds in
[18] blood.

[19] A: Yes, this is a document Titled Organic
[20] Fluorocompounds in Blood, from Walt Raines to Bob
[21] Richards, dated July 25th, and it was received by me
[22] on July 26.

[23] Q: And again this document you got is again
[24] referencing the 1976 Guy article, correct?

[25] A: It's referencing the article Organic

2—05:00:21 25—05:01:35

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[1] Fluorocompounds in Human Plasma: Prevalence and
[2] Characterization, by Guy, Taves, and Brey, yes.

[3] Q: If you'll look on the second page, there's
[4] a reference to PP&R. Do you see that?

[5] A: Yes.

[6] Q: PP&R, what does that stand for?

[7] A: Polymer products and resin. It was what
[8] was the plastic department that ran the Parkersburg
[9] plant.

[10] Q: Is that the business unit that was
[11] responsible for C-8 at the Washington Works plant?

[12] A: It was the business unit that had all
[13] responsibility for any type of plastic products that
[14] would be made of which C-8 was used in the
[15] manufacture of some.

[16] Q: You'll see in the third bullet under PP&R
[17] there's a statement "decided not to report to EPA
[18] under 8(c) of TSCA." Do you see that?

[19] A: Yes.

[20] Q: Did you participate in that decision?

[21] A: I don't recall whether I did or not.

[22] Q: Do you know who did?

[23] A: No, I don't. It's fairly self-explanatory
[24] thought. The reason they decided not to report
[25] because it was disclosed previously in the '76

1—05:01:36 25—05:02:32

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[1] article and because there were — no adverse health
[2] effect is known, therefore, no substantial risk.

[3] That's what they required, a substantial risk report.

[4] Q: And how do you decide whether there is no
[5] substantial risk without having completed the health
[6] studies yet?

[7] A: Based upon the data we had at that point
[8] in time. That didn't mean that we forever foreclosed
[9] that possibility, just means at that point in time we
[10] saw no substantial risk so therefore we saw no
[11] obligation to report.

[12] Q: And, in fact, the data that was available
[13] to Du Pont by that point was indicating elevated
[14] liver enzyme results at both the Washington Works
[15] plant and the Chambers Works plant, correct?

[16] A: From the document that we looked at
[17] earlier, that is true, but it wasn't exclusively just
[18] to that group. It was in some of the other people
[19] too.

[20] Q: And Du Pont hadn't followed up yet to look
[21] into whether or not those elevations were
[22] specifically related to C-8 yet, correct?

[23] MR. GREEN: Object to be the form.

[24] Q: (By Mr. Bilott) Is that correct?

[25] A: They were at the point of doing that.

1—05:02:34 25—05:03:53

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[1] Q: Without having done that yet, without
[2] having established any safe level for C-8 in blood,
[3] how was Du Pont able to determine there was no
[4] adverse health effect?

[5] A: Because at that time we did not see any
[6] adverse health effects because it says no adverse
[7] health effect is known and the 1976 article had
[8] already been reported.

[9] Q: Why not err on the side of reporting that?

[10] A: Why err on the side of reporting it?

[11] Q: Let's refer back to your article that you
[12] authored in 1978 specifically on the duty to report
[13] just this kind of information.

[14] A: I don't think it's a duty to report this
[15] type of information.

[16] Q: Well, you specifically say — I'll refer
[17] you back again.

[18] MR. GREEN: You want to show it to the
[19] witness?

[20] MR. BILOTT: I'm finding it first.

[21] MR. GREEN: Okay.

[22] Q: (By Mr. Bilott) On the last paragraph,
[23] last paragraph of your article on Exhibit 3, you
[24] state that "when it comes to such intensely emotional
[25] subjects as occupationally-related cancer and chronic

1—05:03:54 25—05:05:03

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[1] illness caused by workplace conditions, a company
[2] cannot risk the possibility of being placed in the
[3] compromising position of withholding information or
[4] making a false judgment about who should know what.
[5] It is the duty of every company's management to
[6] discover and reveal the unvarnished facts about
[7] health hazards."

[8] And I guess why then, based on that, would
[9] you not err on the side of providing the information
[10] that was known to the company about C-8 being in
[11] general population blood and worker blood, the
[12] preliminary findings of elevated liver enzymes, why
[13] wasn't that information made available?

[14] A: We had no reason at that point in time to
[15] think this was an adverse health hazard.

[16] Q: You had no reason to think it wasn't,
[17] correct?

[18] A: No, it wasn't, but if you reported every
[19] little thing just because it wasn't — just because
[20] it very possibly a thousand years from now could be,
[21] then you'd lose the whole purpose of it.

[22] We had at that point in time obviously
[23] made a decision that we didn't have enough data or
[24] enough reason to feel that we had an 8(e) reporting
[25] obligation at that point in time.

1—05:05:04 25—05:06:22

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[1] Q: That was inconsistent though with
[2] Du Pont's policy of reporting or otherwise
[3] publicizing relevant findings even if they aren't
[4] required under the 8(e) law, correct?

[5] A: I don't find it inconsistent at all.
[6] (Plaintiffs' Exhibit 20 was marked
[7] for identification.)

[8] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[9] hand you what's been marked as Exhibit 20 and ask if
[10] you can identify this as a July 30, 1979 memo that
[11] you received from a Eugene Berman at Du Pont?

[12] A: This was a privileged legal document.

[13] Q: A what?

[14] A: A privileged legal document that is titled
[15] Fluorine Blood Levels, dated August the 1st of 1979.

[16] Q: Who is Eugene Berman?

[17] A: He was a lawyer in the legal department,
[18] in the environmental section of the legal department.

[19] Q: It's your understanding this would have
[20] been a privileged communication?

[21] A: I assumed it was. I don't know. I don't
[22] know enough about your business to know.

[23] Q: On the second paragraph — well, first of
[24] all, on the first paragraph there's a reference to a
[25] meeting of various individuals that are listed above,

1—05:06:27 25—05:07:24

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[1] including yourself. Do you see that?

[2] A: Uh-huh.

[3] Q: And then there's a discussion — there's
[4] reference to a discussion having been had of the
[5] review of all various types of data on FC-143 and
[6] blood data. Do you see that in the first paragraph?

[7] A: Yes.

[8] Q: In the second paragraph "based upon this
[9] review," this is in quotes, "it was concluded that
[10] the information did not reasonably support a
[11] conclusion that a substantial risk was presented,
[12] based primarily upon the absence of any known adverse
[13] health effects relating to fluorine in the blood."
[14] Do you see that?

[15] A: Yes.

[16] MR. GREEN: Counsel — go ahead and ask
[17] your question.

[18] Q: (By Mr. Bilott) Okay. What I'm going to
[19] ask you about is the next sentence here. There a
[20] statement, "on July 26, 1979, I," the lawyer, Eugene
[21] Berman, "advised Robert Prokop of 3M of our above
[22] conclusions with regard to Section 8(e) and our
[23] general practice of reporting or otherwise
[24] publicizing relevant findings even if they are not
[25] required to be reported under Section 8(e). I asked

1—05:07:27 25—05:08:33

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[1] Prokop to clarify what plans 3M had with regard to
[2] publicizing this fluorine blood level information
[3] and/or directly advising the relevant health agency
[4] of the information. Prokop believed that he — I'm
[5] sorry. Prokop indicated that he believed 3M was
[6] favorably disposed toward disclosing this information
[7] and promised a more definitive response next week,"
[8] and it goes on. Do you see that?

[9] A: Yes.

[10] Q: Do you recall that during this meeting
[11] part of the decision being made by Du Pont not to
[12] disclose this with the information that 3M was
[13] going — was likely to disclose it itself?

[14] MR. GREEN: Hang on a minute, counsel.
[15] Since the witness has said this is a privileged
[16] communication it seems to me I need to think
[17] about whether we want to assert that it was
[18] privileged so what I'd ask you to do is maybe
[19] have the reporter flag that and let me look into
[20] this and we can pick this up at a later point in
[21] the deposition.

[22] MR. BILOTT: I guess our position would be
[23] even if you think it is privileged, it's clearly
[24] waived by us having it, and since we have the
[25] content of it being waived by producing this to

1—05:08:36 25—05:28:18

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[1] us we're entitled to ask about what's the
[2] information that's provided here. The
[3] discussion of what happened in the meeting is
[4] here. We have it. It's been disclosed. It's
[5] waived so we're entitled to ask about what was
[6] said during the meeting.

[7] MR. GREEN: Well, it depends on whether it
[8] was inadvertently produced or not and I ought to
[9] look into it and see. It may — just exactly
[10] what the circumstances are.

[11] It could well be that we don't have any
[12] area of disagreement but it seems to me that we
[13] are. If you wouldn't mind coming back to
[14] this —

[15] MR. BILOTT: Well, I would because this is
[16] a topic I wanted to deal with now, given the
[17] documents we're looking at, and I guess we just
[18] need to know whether you're going to instruct
[19] the witness not to answer this on the grounds of
[20] privilege because then we'll just take it up
[21] with the Court.

[22] MR. GREEN: Well, I — let's go off the
[23] record for a minute if you don't mind.

[24] (Discussion ensued off the record)

[25] MR. GREEN: While we were on a break

1—05:28:29 25—05:29:55

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[1] accommodated by counsel for plaintiffs to
[2] investigate the status of this document I
[3] investigated and found that it is not a
[4] privileged document and accordingly we're all
[5] set to move forward.

[6] Q: (By Mr. Bilott) Okay. Getting back to
[7] Exhibit 20, again I think the question we had right
[8] before we took the break here was there's a reference
[9] that Du Pont counsel here, Mr. Berman, had told a
[10] Robert Prokop at 3M of the Du Pont conclusion on 8(e)
[11] and Du Pont general practice of reporting or
[12] otherwise publicizing relevant findings even if
[13] they're not required to be reported under 8(e) and
[14] had asked 3M to clarify what they were planning on
[15] doing.

[16] And my question to you was do you recall
[17] those issues being discussed at the meeting that you
[18] attended here?

[19] A: I don't specifically recall the issues.
[20] Earlier the document said though accordingly it was
[21] concluded that no reporting under TSCA Section 8(e)
[22] was required, referring to that meeting I attended.

[23] Q: Do you recall any discussions at any point
[24] in time when you were employed at Du Pont about
[25] accommodating or deferring to 3M on issues with

1—05:30:03 25—05:31:11

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[1] respect to TSCA 8(e) reporting?

[2] A: Not specifically where we felt we had an
[3] obligation to report we would not defer to 3M. We
[4] had already apparently concluded that no reporting
[5] under TSCA 8(e) was required but as a courtesy to 3M
[6] Gene Berman called Robert Prokop to tell him what we
[7] had concluded and then let 3M make whatever decision
[8] they wanted to make also.

[9] Q: And what Mr. Berman is referencing here as
[10] our general practice of reporting or otherwise
[11] publicizing relevant findings even if they're not
[12] required to be reported under Section 8(e), that's
[13] consistent with your understanding of what Du Pont's
[14] approach was to 8(e) reporting, correct?

[15] A: It's consistent with my understanding,
[16] yes, but he had already said previously in the letter
[17] that it was concluded that no reporting under TSCA
[18] Section 8(e) was required.

[19] Q: I'm not asking about this specific
[20] decision. I'm just asking about his reference here
[21] to the general practice for reporting.

[22] A: Yes, it was the general practice.

[23] Q: Do you recall ever hearing any discussion
[24] about 3M asking Du Pont not to report something under
[25] TSCA 8(e)?

1—05:31:12 25—05:32:36

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[1] A: No.

[2] Q: Do you recall a point in time where you
[3] asked Dr. Power at the Washington Works plant to
[4] follow up on the liver enzyme work and also to look
[5] into myocardial infarction rates at the plant?

[6] A: I don't specifically recall but I'm sure
[7] you've got a document that says that so I'll be glad
[8] to look at it.

[9] MR. BILOTT: Mark that.

[10] (Plaintiffs' Exhibit 21 was marked
[11] for identification.)

[12] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[13] hand you what's been marked as Exhibit 21. First of
[14] all, I'll ask if you identify this as a memorandum
[15] prepared by W.E. Fayerweather, an epidemiologist at
[16] Du Pont?

[17] A: Yes.

[18] Q: Do you see up at the top, it's cut off a
[19] little bit, the reference to you being a copy holder?

[20] A: Yes.

[21] Q: This document, dated August 28th of 1979,
[22] regarding status report on Washington Works liver
[23] function survey and coronary heart disease, says that
[24] B.W. Karrh asked me, Mr. Fayerweather, to look into
[25] the liver function test results for workers with C-8

1—05:32:37 24—05:33:25

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[1] exposure. Do you see that?

[2] A: Yes.

[3] Q: Do you recall why you asked him to do
[4] that?

[5] A: It goes back to the previous documents
[6] we've already looked at where Dr. Power — one of the
[7] follow-up items was that I was going to talk with
[8] Dr. Power. Dr. Power subsequently sent me a letter
[9] or I sent him one. I've forgotten which. And then I
[10] asked Bill Fayerweather to get back with Dr. Power to
[11] follow up further on those liver function tests that
[12] we talked about earlier.

[13] Q: You'll notice there's also a reference
[14] here that Y.L. Power, the Du Pont Washington Works
[15] plant doctor, asked Mr. Fayerweather to examine
[16] myocardial infarction cases and deaths at the plant.
[17] Do you see that?

[18] A: Yes.

[19] Q: Do you know why an interest in myocardial
[20] infarction cases and deaths at the Washington Works
[21] plants?

[22] A: I don't remember specifically in this case
[23] but I can tell you what we did. Every two years we
[24] would run an epidemiologic database. I think I've
[25] already testified to that once today.

1—05:33:30 25—05:34:39

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[1] We would run our database for every plant
[2] in the whole company system in the U.S. We would
[3] compare the data from that plant against company wide
[4] data, and if anything looked unusual in those data,
[5] like an increase in heart attacks or an increase in
[6] certain kinds of cancer or anything, we would go back
[7] to the plant and ask the plant to specifically look
[8] into the work history of those people who had the
[9] heart attacks or whatever it was we were looking at,
[10] in this case heart attacks, and try to evaluate if
[11] they had anything in common, if they worked in the
[12] same area, they had the same chemical exposures,
[13] whatever, so that we could then determine if we had a
[14] problem at that plant and it was part of the
[15] epidemiologic follow-up program.

[16] So when Bill was writing the letter to
[17] Dr. Power about the C-8 liver function test, he had
[18] took that opportunity to also follow up on myocardial
[19] infarctions and cardiac deaths.

[20] Q: So it's your understanding that there were
[21] reports generated every two years looking into cancer
[22] rates at various Du Pont plants?

[23] A: Looking at cancer or any other disease.
[24] As I testified earlier, we had a database that anyone
[25] who missed work eight days or more would be entered

1—05:34:42 25—05:35:37

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[1] into the database or anyone who died, either an
[2] employee or a pensioner, would be entered into the
[3] database.

[4] So we had that complete database and one
[5] of the things in that article that we talked about
[6] the very first thing this morning where I pointed out
[7] the four different things that were essential, one of
[8] them was the epidemiologic follow-up. We would look
[9] at that database to see if any particular plant site
[10] had a particular problem in any one medical area or
[11] cause of death area so that we could then follow up
[12] and see if we were doing something on the plant that
[13] was causing that.

[14] And so every two years we would run those
[15] data and we would compare every plant against the
[16] total company population so that we could see if any
[17] plant stood out.

[18] If a plant did stand out, we would go back
[19] to that plant physician and ask the plant physician
[20] to go back through the medical records and the work
[21] records and tell us if there was anything unusual
[22] about that group of people.

[23] (Plaintiffs' Exhibit 22 was marked
[24] for identification.)

[25] Q: (By Mr. Bilott) Dr. Karrh, I'm going to

1—05:35:54 25—05:37:19

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[1] hand you what's been marked as Exhibit 22 and ask if
[2] you can identify this as an article that you authored
[3] on Cancer Epidemiologic Surveillance in the Du Pont
[4] Company, along with a Mr. Pell, Maureen O'Berg, that
[5] appeared in the Journal of Occupational Medicine in
[6] November of '78?

[7] A: I coauthored it, yes.

[8] Q: In this document you go into more detail
[9] about what you just described here, which is the
[10] Du Pont approach to gathering health information, how
[11] that's summarized and how that's analyzed at Du Pont?

[12] A: That's correct.

[13] Q: Going back now to Exhibit 21,
[14] Mr. Fayerweather says in the second paragraph that
[15] his preliminary results suggested C-8 exposed workers
[16] may possibly have positive liver function tests more
[17] often than the plant population as a whole and that
[18] the number of active wage roll employees having
[19] myocardial infarctions from '74 to '77 was somewhat
[20] higher than was expected based on company-wide
[21] experience. As a consequence certain steps were
[22] being taken, one of which he references as a liver
[23] function survey and the second is coronary heart
[24] disease mortality study. Do you see that?

[25] A: Yes.

1—05:37:19 25—05:39:06

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[1] Q: Do you recall participating in any work
[2] involving the follow-up liver function survey at the
[3] Washington Works plant or the coronary heart disease
[4] mortality study?

[5] A: I don't recall specifically being involved
[6] in that. I'm sure I got the results from it at some
[7] point in time.

[8] (Plaintiffs' Exhibit 23 was marked
[9] for identification.)

[10] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[11] hand you what's been marked as Exhibit 23 at your
[12] deposition and ask you to take a moment to look at
[13] that and tell me if you can identify what this
[14] document is.

[15] A: This is a January 28th, 1980 document to
[16] Walt Raines, R.M. Shepherd, and Thistleton. And I
[17] don't know — titled Liver Enzyme Study of Workers
[18] Exposed to C-8 At Parkersburg, and it says summary of
[19] conclusions reached at a meeting on January the 25th
[20] to discuss that study.

[21] Q: And you're referenced as getting a copy of
[22] this document, correct, at the top?

[23] A: Yes, I am.

[24] Q: And this particular document which
[25] summarizes conclusions reached regarding follow-up

1—05:39:10 25—05:40:14

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[1] liver enzyme study indicates that the mean SGOT in
[2] certain of the employees and the mean AP in certain
[3] of employees are elevated. Do you see that in the
[4] second bullet?

[5] A: Yes.

[6] Q: In the fourth bullet there's the
[7] statement, "based on available data we are unable to
[8] explain why only the mean SGOT would be elevated in
[9] one group and only the mean AP would be elevated in
[10] another." Do you see that?

[11] A: Yes.

[12] Q: First of all, is it your understanding
[13] that these SGOT and AP references, those are
[14] references to liver enzyme?

[15] A: Liver function tests, yes, liver enzymes.

[16] Q: So by January of 1980 Vann Brewster, who I
[17] think you previously identified as being Du Pont
[18] assistant medical director, correct?

[19] A: That's correct.

[20] Q: Was aware that there were some elevated
[21] liver enzymes in the Washington Works employees that
[22] they couldn't explain at that point, correct?

[23] A: Well, I think that the next dot somewhat
[24] explains it, "after comparing the local laboratory
[25] liver enzyme results with results from Upjohn," which

4—05:40:16 25—05:41:28

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[1] was the laboratory that most of the company was
[2] using, whereas Parkersburg was using a local
[3] laboratory, "on the same employees there appears to
[4] be a local laboratory problem resulting in
[5] consistently higher SGOT readings."

[6] Q: Do you recall the follow-up that was done
[7] to confirm whether that was in fact having any effect
[8] on the liver enzyme results?

[9] A: Dr. Brewster went on to recommend that
[10] either a different technique or a different
[11] laboratory be considered for routine medical
[12] examinations on all employees at Parkersburg and I'm
[13] sure that that recommendation was carried out.

[14] Q: Do you right now as we sit here recall
[15] what the results of the follow-up were?

[16] A: No. That was only 24 years ago.

[17] (Plaintiffs' Exhibit 24 was marked
[18] for identification.)

[19] Q: (By Mr. Bilott) And just for
[20] clarification, I realize a lot of these documents are
[21] quite old, and my questions are asking you what your
[22] recollections are of those events, and if you don't
[23] recall, please, as you just did, let me know you
[24] don't recall.

[25] Dr. Karrh, I'm going to hand you what's

1—05:41:30 25—05:43:15

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[1] been marked as Exhibit 24 and ask you to take a look
[2] at that and tell me if you recall seeing — let me
[3] rephrase it, if you can identify what this is.
[4] A: This is a letter from Vann Brewster,
[5] assistant medical director, dated June 9, 1980, to
[6] Lance Percival in the polymer products department
[7] which they had responsibility to run the Washington
[8] Works plant. It's titled Your Memo, June 4,
[9] Requesting Comments on the Washington Works
[10] Communication Draft Fluorosulfactants in Blood.
[11] Q: And you recall — I'm sorry. You notice
[12] that you're indicated as having received a copy of
[13] this document?
[14] A: Yes.
[15] (A recess was taken)
[16] Q: (By Mr. Bilott) Dr. Karrh, you'll notice
[17] here that Dr. Vann Brewster, the assistant medical
[18] director, is expressing some concern that a draft of
[19] the fluorosulfactants in blood study is indicating
[20] that Du Pont is not planning on continuing liver
[21] tests. Do you see that?
[22] And he makes some recommendations as to
[23] how language should be changed in the draft to make
[24] it clear that follow-up will be occurring. Do you
[25] see that?

1—05:43:16 25—05:44:46

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[1] A: Yes.
[2] MR. BILOTT: Let's move to the next
[3] document.
[4] (Plaintiffs' Exhibit 25 was marked
[5] for identification.)
[6] MR. GREEN: I object to the last question
[7] on the grounds the document speaks for itself.
[8] Q: (By Mr. Bilott) Let's go back to the
[9] previous exhibit here that we just looked at, 24, and
[10] you'll see Dr. Vann Brewster says at the end of the
[11] paragraph — let me back up, the very first
[12] paragraph, he says "even though we have found no,
[13] quote, conclusive evidence of an occupationally
[14] related health problem, we still cannot explain why
[15] the mean SGOT was significantly higher among the TFE
[16] process workers and that the mean AP was
[17] significantly higher." Therefore, he recommends
[18] making some changes, one of which is adding language
[19] saying that, however, it was recommended that the
[20] study of liver tests continue, and another change
[21] being to add, quote, continue to evaluate the liver
[22] tests of employees with potential exposure, correct?
[23] A: That's what it says. That goes back to
[24] what we said before, that this just shows they we
[25] were still trying to make sure we knew exactly what

1—05:44:48 25—05:45:49

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[1] was going on so we could provide safe and healthful
[2] workplaces.
[3] Q: I'm going to hand you what's been marked
[4] as Exhibit 25 and ask you to take a look at that and
[5] tell me if you can identify what that is.
[6] A: Well, it's a document dated January 28th,
[7] 1981, to Harold Serenbetz from me, titled Liver
[8] Function Study of Washington Works Employees Exposed
[9] to C-8.
[10] Q: So that's a documented you generated and
[11] sent to Mr. Serenbetz?
[12] A: I generated the cover letter. The cover
[13] letter says "attached is W.E. Fayerweather's final
[14] report of a liver function study at Washington
[15] Works."
[16] Q: Who was Mr. Serenbetz?
[17] A: Serenbetz was the — every operating
[18] department within the company that operated plants
[19] had an individual on corporate staff, corporate
[20] departmental staff, that was responsible for safety,
[21] health, and environmental functions throughout all
[22] those plants, and his responsibility was to
[23] coordinate all of those activities among the plants.
[24] Harold Serenbetz was the coordinator of
[25] safety, health, environmental activity for the

1—05:45:49 25—05:46:44

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[1] polymer products department.
[2] Q: So he was that person within the business
[3] group?
[4] A: He was within the business. He did not
[5] have a line responsibility but his responsibility was
[6] to coordinate everything for the line manager, for
[7] the senior managers in that particular business
[8] group.
[9] Q: And do you know whether Mr. Serenbetz is
[10] still alive?
[11] A: I don't know. He's the first person I
[12] ever knew of that had a heart transplant and that was
[13] about 25 years ago so I don't know.
[14] Q: Do you know whether he was still with
[15] Du Pont when you retired in '96?
[16] A: No, he was not with Du Pont when I
[17] retired.
[18] Q: Do you know when he left Du Pont?
[19] A: When he had the heart transplant, which
[20] would have been — probably would have been somewhere
[21] around the late eighties.
[22] Q: In your cover memo that you're forwarding
[23] to Mr. Serenbetz in the business unit there, you make
[24] a reference to the final Fayerweather liver function
[25] study which is attached and you pick up that quote

1—05:46:48 25—05:48:08

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[1] that Mr. Vann Brewster had concerns with in that
[2] previous exhibit of no conclusive evidence of an
[3] occupationally related health problem among workers
[4] exposed to C-8. Do you see that?

[5] A: Yes, but that doesn't have anything to do
[6] with Vann Brewster's previous note, that previous
[7] exhibit. This is a summary of what that study found.

[8] Q: And did you review in detail the '81
[9] Fayerweather liver function study?

[10] A: Yes.

[11] Q: And you make a representation here that
[12] although initial analysis suggested there might be
[13] liver effects attributable to C-8, further analysis
[14] did not support this position, correct?

[15] A: That's what this cover letter says.

[16] Q: I'd like to refer you to what the actual
[17] report says. Look to the discussion section on Page
[18] 7. Down at the bottom you see the heading
[19] discussion?

[20] A: Uh-huh.

[21] Q: After this sentence about no conclusive
[22] evidence of an occupationally related health problem?

[23] A: Yes.

[24] Q: The next paragraph, "some of the SGOT data
[25] suggested there might be a liver effect among certain

1—05:48:11 25—05:49:24

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[1] C-8 exposed workers." And then it references the
[2] results from those workers. Do you see that?

[3] A: Yes.

[4] Q: And then on the next page there's also a
[5] reference to the mean AP was significantly higher
[6] among FEP service and FEP process operators. Do you
[7] see that?

[8] A: Yes.

[9] Q: One of the reasons Du Pont concluded that
[10] these elevations at the plant provided no, quote,
[11] conclusive evidence of an occupationally related
[12] problem was the fact that the elevations were being
[13] found throughout the plant, they weren't located in a
[14] particular area, correct?

[15] A: I don't recall if that was correct or not,
[16] but the previous two quotes that you gave them, you
[17] put them in a different context than the way they
[18] really should have been because if you go back to
[19] Page 1 of Dr. Fayerweather's report, the very last
[20] sentence — paragraph underneath summary on Page 1,
[21] it says "these data provided no conclusive evidence
[22] of an occupationally related health problem among
[23] workers exposed to C-8. Although initial analyses
[24] suggested that there might be liver effects
[25] attributable to C-8 exposure, further analyses did

1—05:49:26 25—05:50:32

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[1] not support this conclusion — or this position."

[2] That's exactly the words that I picked up in my cover
[3] letter that you were trying to find issue with.

[4] Q: But the recommendation from Mr. Vann
[5] Brewster was despite that there should be further
[6] study of the liver effects?

[7] A: And that's what this was, was a further
[8] study of the liver effects.

[9] Q: Do you know how the control group was set
[10] up for this study? If we refer to Page 3, the very
[11] bottom of Page 3, it talks about selection of the,
[12] quote, nonexposed control group. Do you see that?

[13] A: Yes.

[14] Q: It says "the control group consisted of a
[15] 10 percent systematic sample of all active Washington
[16] Works employees who as of August '79 had never worked
[17] in the Teflon area." Do you see that?

[18] A: Yes. It goes on to say "mechanics and
[19] laboratorians were excluded from the controls since
[20] their exposure potentials could not be well
[21] documented." Do you see that?

[22] Q: Yes.

[23] I guess what I'm asking you though is the
[24] control group was actually selected from other
[25] Du Pont Washington Works employees, correct?

1—05:50:34 25—05:52:31

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[1] A: Apparently so, correct.

[2] Q: Do you know why when comparing the C-8
[3] blood levels among the exposed group Du Pont did not
[4] compare those levels to the levels of C-8 in the
[5] blood of this, quote, nonexposed group at the
[6] Washington Works plant and instead used as the
[7] control blood level the blood data from Wilmington,
[8] Delaware?

[9] MR. GREEN: Could you read that back,
[10] please.

[11] (The record was read by the reporter)

[12] Q: (By Mr. Bilott) Let me clarify the
[13] question. Page 4, there's a reference to Item Number
[14] 5, blood fluoride levels. Do you see that?

[15] A: Yes.

[16] Q: "Prior to the study blood fluoride levels
[17] had been measured on 78 of the plant's Teflon area
[18] workers and on 25 Wilmington office workers." Do you
[19] see that?

[20] A: Yes.

[21] Q: And then if you flip to the chart in this
[22] study that summarizes the blood data, it's EID102526.

[23] A: All right.

[24] Q: I'm sorry. It's Table 11, EID102531.

[25] A: All right.

1—05:52:32 25—05:53:41

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[1] Q: You'll see that there's a reference there
[2] to the blood sampling data that was used as the
[3] control from Wilmington personnel. Do you see that?

[4] A: Yes.

[5] Q: And I guess what I'm asking is do you know
[6] why Du Pont used Wilmington, Delaware blood data as
[7] the control for C-8 levels but used the liver enzyme
[8] levels from the actual unexposed control group at
[9] Washington Works? Why not take C-8 levels of the
[10] control group at Washington Works?

[11] MR. GREEN: Object to the form.

[12] Q: (By Mr. Bilott) Do you understand what
[13] I'm saying?

[14] A: Yes. You're actually trying to compare
[15] apples and oranges when you try to make those two
[16] comparisons come out even because they're not going
[17] to.

[18] What we were trying to do with the
[19] Wilmington office group was determine if plain old
[20] people who had never been exposed to fluorosulfactant
[21] compound or fluorinated compounds in their workplace
[22] would have blood fluoride levels.

[23] We were just trying to see if general
[24] population not exposed might have some so we'd know
[25] what was the background level. So that's why we

1—05:53:44 25—05:54:57

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[1] chose the Wilmington group.

[2] We chose the liver function group
[3] controls, Washington Works, because of socioeconomic
[4] factors. There are great variations throughout the
[5] country in different body monitoring tests like blood
[6] liver function tests, blood tests, things like that,
[7] based upon geographic and socioeconomic factors that
[8] are local to that community. So we were trying to
[9] make the best comparison we could make of liver
[10] function with the people who ate the same type stuff,
[11] worked in the same general area, came from the same
[12] general genetic background, had everything in common
[13] except they didn't work in the fluorosulfactant area.

[14] Q: I understand. I guess what — maybe let
[15] me rephrase that question. The purpose of this study
[16] was to see whether there were elevated liver function
[17] results within certain groups at the Washington Works
[18] plant?

[19] A: No. The purpose of the study was to
[20] see — since we already knew there were some, was to
[21] see why and if there was any relationship to the
[22] workplace.

[23] Q: And in particular whether there was any
[24] relationship with C-8, correct, as indicated on the
[25] heading liver function study of Washington Works

1—05:55:00 25—05:55:57

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[1] employees exposed to C-8?

[2] A: That's correct.

[3] Q: So if the control group also was exposed
[4] to C-8, wouldn't that affect the results?

[5] A: If they were exposed to levels of C-8 that
[6] could affect the results, yes, it could, but we had
[7] no reason at that time to think that they were
[8] exposed to levels of C-8 that could cause any
[9] liver — even if they were exposed to any levels of
[10] C-8 at that point in time.

[11] Q: We now know, however, that everyone at the
[12] Du Pont Washington Works plant was exposed to C-8
[13] because it was in the air and also in the drinking
[14] water, correct?

[15] A: We know it was in air and drinking water.
[16] I cannot attest that we knew that everyone was
[17] exposed.

[18] Q: And, in fact, a couple years later you
[19] made statements to folks at Du Pont that there is the
[20] potential for exposure to all employees at the plant
[21] to C-8?

[22] A: If you'll show me a document, I'll be glad
[23] to verify whether I said that or not.

[24] Q: Do you recall making a statement like
[25] that?

1—05:55:57 25—05:56:54

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[1] A: You've had a tendency to take things out
[2] of context so I'd rather see what statement I made
[3] and then that way I can tell you whether it was true
[4] or not.

[5] Q: You don't recall that?

[6] A: I don't say that I didn't recall it or did
[7] recall it. I want to see exactly what you're
[8] referring to because I may not have made it exactly
[9] the way you said it.

[10] Q: I'm not asking you about documents. I'm
[11] asking for your recollection of whether you ever came
[12] to the decision or conclusion after looking at the
[13] data that was made available to you over time that in
[14] fact all of the employees at the Washington Works
[15] plant had the potential for exposure to C-8?

[16] A: I made the conclusion that employees at
[17] the Washington Works plant had the potential for
[18] exposure to C-8, yes.

[19] Q: And knowing that and having seen the data
[20] that was developed later indicating that C-8 was
[21] actually in the plant drinking water as well, what
[22] was done to go back and redo this study to make sure
[23] that the control group was in fact an unexposed
[24] control group?

[25] A: I don't recall that we did anything,

1—05:56:56 25—05:58:42

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[1] mainly because we felt this study was a pretty valid
[2] study and would stand on its own, particularly since
[3] they could not conclude that there was any
[4] relationship to the liver function abnormalities and
[5] to the workplace.

[6] Q: Even though you now knew that the study
[7] was in fact comparing C-8 exposed workers to other
[8] C-8 exposed workers?

[9] A: Well, with different levels of exposure
[10] though. The people who were working in the C-8 areas
[11] would have had a higher level of exposure to C-8 than
[12] people who were not working in the C-8 area.

[13] Q: And, in fact, a recommendation was made
[14] ten years later that went to you and Mr. Ligo,
[15] recommending specifically to redo this study,
[16] correct? Do you remember that?

[17] A: I don't recall that but it may well have
[18] been. I don't recall it.

[19] Q: And that you made a decision not to redo
[20] the study in 1991, do you remember that?

[21] A: I don't recall that.

[22] (Plaintiffs' Exhibit 26 was marked
[23] for identification.)

[24] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[25] hand you what's been marked as Exhibit 26 and ask you

1—05:58:45 25—05:59:48

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[1] to take a look at that and tell me if you can
[2] identify what that is.

[3] A: Well, it's a document that Bill
[4] Fayerweather produced. Its titled Authorization For
[5] Services, to the polymer products department, dated
[6] October the 4th, 1991, and it's titled
[7] Cross-Sectional Study of Liver Enzymes Among
[8] Washington Works Employees With Potential Exposure to
[9] C-8.

[10] Q: You see attached to it is the study
[11] proposal?

[12] A: The document attached says Study Proposal
[13] for a Cross-Sectional Study of Liver Enzymes Among
[14] Washington Works Employees with Potential Exposure to
[15] C-8.

[16] Q: You see there the objectives and the
[17] rationale?

[18] A: Yes.

[19] Q: Included among the rationale's follow-up
[20] to 1981 study and then specifically quoted is the
[21] statement "these data provided no conclusive evidence
[22] of an occupationally-related health problem among
[23] workers exposed to C-8." Do you see that?

[24] A: I see that.

[25] Q: Does this refresh your recollection now as

1—05:59:51 25—06:00:44

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[1] to whether a request had been made from Bill
[2] Fayerweather to go back — I'm sorry, by actually
[3] W.P. Anderson and Gerry L. Kennedy, to go back and
[4] update the liver study from 1991?

[5] A: That's apparently what this document is.

[6] Q: And the estimated cost was 45,000. Do you
[7] see that?

[8] A: Yes, I see that.

[9] Q: There's reference at the top here, some
[10] handwriting. Do you see the handwriting on the first
[11] page?

[12] A: Yes.

[13] Q: Do you recognize that handwriting?

[14] A: No, I don't.

[15] Q: It's referencing an October 4th, '91
[16] meeting and there's initials BWK and other initials.
[17] Do you see those initials?

[18] A: Yes.

[19] Q: Do you recognize any

[20] A: Yes.

[21] Q: Do you recall participa
[22] around that time with those
[23] this study proposal?

[24] A: No, I don't.

[25] Q: In fact, the handwritten

1—06:00:48 25—

[1] GLK argued for the study, te
[2] need info for stronger comm
[3] that?

[4] A: Yes.

[5] Q: Rest of group argued ag
[6] see that?

[7] A: I see that part of it. I ca
[8] rest of it.

[9] Q: Do you recall arguing against doing the
[10] study?

[11] A: No. And that gets back to the question
[12] you asked me when you said did I refuse to do the
[13] study. And I don't recall arguing against it.

[14] Q: Do you know why this study wasn't done?

[15] A: No, I don't.

[16] (Plaintiffs' Exhibit 27 was marked
[17] for identification.)

[18] Q: (By Mr. Bilott) Dr. Karrh, you've been
[19] handed what's been marked as Exhibit 27 and ask you
[20] to take a look at that and tell me if you can
[21] identify what that is.

[22] A: It's a document that's titled Liver Study
[23] of Washington Works Employees. And down below it
[24] says exposed to C-8, 1/15/81. And I don't know who
[25] produced this document.

1-06:02:01 25-06:03:20

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[1] Q: Do you see some initials down above the
[2] date there of 1/2/92 SLG?
[3] A: 1/2/92?
[4] Q: The very bottom left-hand corner of the
[5] document.
[6] A: Yes.
[7] Q: You recognize anybody with those initials?
[8] A: No.
[9] Q: You'll see it references the original
[10] study that we looked at before from Fayerweather from
[11] January 15th of '81 and there's a reference proposed
[12] study update with that same cost again, 45,000. And
[13] there's a statement "reviewed with Karrh and Ligo
[14] October 4, decided not to pursue."
[15] And again does that refresh your
[16] recollection of being involved in the discussion in
[17] which any recommendation was made not to do this
[18] study?
[19] A: No.
[20] Q: At the time this proposal was made to
[21] update the study in 1991, some ten years after the
[22] original study was done, Du Pont was aware that all
[23] the workers were potentially exposed to C-8, that C-8
[24] was in the air and was getting out into drinking
[25] water at that point. What would be the medical

1-06:03:23 25-06:04:23

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[1] reason not to update the liver function study that
[2] was — whose conclusions were based originally on
[3] comparing exposed workers to exposed workers?
[4] A: Primarily because there were different
[5] levels of exposure as I mentioned earlier. Those
[6] people who were working in the work area would have
[7] had greater potential for higher exposure than those
[8] people who were being exposed through the air or
[9] through drinking water.
[10] Q: But they would still be exposed, correct?
[11] A: Be exposed to some level but we had no
[12] data to indicate that the levels to which they were
[13] being exposed could possibly have an adverse health
[14] effect.
[15] Q: What would be the medical justification
[16] though for not updating that study to make sure that
[17] the conclusions were based on truly comparing C-8
[18] exposed people to non-C-8 exposed people?
[19] A: It's a matter of time and priorities and
[20] what other types of work you've got to do and whether
[21] or not you have the people available to do it and
[22] having to take — you know, stop some other study to
[23] apply somebody to doing this study and we didn't see
[24] a — we did not at that point in time have a good
[25] enough reason to do another study.

1-06:04:24 25-06:05:25

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[1] Q: And, in fact, what Du Pont was really
[2] concerned about was the potential legal liability,
[3] correct?
[4] MR. GREEN: Objection, object to the form.
[5] It's argumentative, no foundation.
[6] Q: (By Mr. Bilott) Do you recall that
[7] discussion?
[8] A: No, I don't recall that discussion, no.
[9] (Plaintiffs' Exhibit 28 was marked
[10] for identification.)
[11] Q: (By Mr. Bilott) I'm going to hand you
[12] what's been marked as Exhibit 28 and ask you to take
[13] a moment to look at this and tell me if you could
[14] identify what it is.
[15] A: It's a handwritten note from someone. I
[16] have no idea from whom. The purpose is should we re
[17] something at this study, C-8 Epi, 10/4/91.
[18] Q: And I'm sorry. You may have just said it,
[19] but do you recognize this handwriting in this
[20] document?
[21] A: No. I said that earlier.
[22] Q: And if you look back at Exhibit 26, and
[23] I'll hand that back to you, you'll notice the
[24] handwriting in that corner, the top right-hand
[25] corner, references an October 4, '91 meeting

1-06:05:29 25-06:06:33

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[1] involving yourself and some other individuals,
[2] including Gerry Kennedy. Do you see that?
[3] A: Uh-huh.
[4] Q: Do you see that those same names are
[5] referenced in these notes from a meeting on the same
[6] date, 10/4/91?
[7] MR. GREEN: Excuse me. Do you see his
[8] name on there?
[9] THE WITNESS: No.
[10] Q: (By Mr. Bilott) Kahrr, K-a-h-r-r?
[11] A: I'm sorry. I don't know who that is.
[12] Q: You don't know who Kahrr is?
[13] A: Not K-a-h-r-r, no, sir.
[14] Q: You don't understand that to be in
[15] reference to you that may have been a misspelling?
[16] A: No.
[17] Q: Do you remember participating, again let
[18] me ask it again, in any way kind of meeting with
[19] Mr. Fayerweather, Kennedy, Anderson, and Ligo about
[20] C-8 Epi studies in October '91?
[21] A: You asked me that when we looked at
[22] Document 26 and I answered then I do not recall that
[23] meeting.
[24] Q: Do you know of anybody at Du Pont that has
[25] a name similar to Karrh, K-a-h-r-r, that would have

1—06:06:38 25—06:07:50

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[1] been involved in a meeting with Fayerweather,
[2] Kennedy, Anderson, and Ligo to discuss C-8
[3] epidemiology issues in 1991?

[4] A: No, I don't.

[5] Q: You'll notice here that the reference is
[6] purpose, should we re-look at this study, question
[7] mark. Then at the very bottom there's a reference to
[8] Kahrr - lots of something to spend dollar symbols to
[9] get at. Do you see that?

[10] And then there's a reference don't see
[11] much something legally either. Do you see that?

[12] A: I see it. I don't know who wrote it or
[13] who they're referencing to.

[14] Q: On the next page there's a reference to is
[15] there a benefit for this study, question mark. Below
[16] that, do we want study. And there's three items
[17] referenced under that, Number 1 being protect
[18] people's health; Number 2, legal requirement; and
[19] then under that it says none that we know of; and
[20] then Number 3, liability. Do you see that?

[21] A: Yes.

[22] MR. GREEN: Object on the grounds that
[23] that's not a complete reading of —

[24] THE WITNESS: He didn't read what was
[25] under Number 1 —

1—06:07:51 25—06:08:43

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[1] Q: (By Mr. Bilott) No, I didn't but I'm
[2] asking you whether Number 3 says liability.

[3] A: Well, let's go back and read what's under
[4] Number 1 —

[5] Q: My question is does Number 3 say
[6] liability?

[7] A: Yes. But under Number 1 in addition it's
[8] saying protect people's health. It says "study would
[9] not help much. Just look at the top 20 people. What
[10] is minimum number of people. What is the time frame.
[11] Is a ten year update long enough."

[12] Q: So you have no trouble reading that,
[13] right?

[14] A: Up to that point.

[15] Q: So under liability then you see the
[16] reference here on "depends on scope of study." And
[17] there's a reference "if just liver, in depth of
[18] review of study." Do you see that?

[19] MR. GREEN: Well, that's not complete.

[20] MR. BILOTT: You're more than welcome to
[21] follow up and read whatever else you want to
[22] read. I'm asking whether or not you see certain
[23] specific statements in this document.

[24] MR. GREEN: Well, I object —

[25] Q: (By Mr. Bilott) "B, cancer problem

1—06:08:45 25—06:09:42

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[1] on-site," do you see that?

[2] A: Uh-huh.

[3] Q: And then there's a reference to leukemia,
[4] bladder, kidney, oral pharynx. Do you see that?

[5] A: I see that reference.

[6] Q: Do you recall discussing potential
[7] liability because of the cancer problem on the site
[8] dealing with leukemia, bladder, kidney cancer, oral
[9] pharynx in connection with a proposed liver study
[10] that had not been updated for ten years?

[11] A: I do not recall discussing that and that
[12] would not be a discussion we would get into because
[13] of legal liabilities because of these types of
[14] things.

[15] We looked for these. That's why we had
[16] the epidemiologic surveillance program that we had,
[17] was to look for them, and if we found them, then take
[18] care of them, make sure that we corrected whatever
[19] might be causing it, make sure that employees were
[20] compensated and appropriately taken care of from a
[21] medical standpoint and we would not have for one
[22] second considered liability.

[23] Q: And, in fact, that's totally inconsistent
[24] with what your testimony was to Congress in 1981,
[25] that Du Pont would not make such a decision based on

1—06:09:46 25—06:10:32

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[1] liability, correct?

[2] MR. GREEN: Object to the form —

[3] Q: (By Mr. Bilott) That we talked about
[4] earlier?

[5] MR. GREEN: Object to the form.

[6] Q: (By Mr. Bilott) We can go back and look
[7] at that statement if that's —

[8] A: What I've been talking about earlier
[9] consistently all day is that Du Pont saw its
[10] obligation was to provide safe and healthful
[11] workplaces for our employees.

[12] We had in place four different programs
[13] that we used to do that. We followed those four
[14] programs and our epidemiology program was sort of the
[15] last line of defense on it, that we would purposely
[16] do epidemiologic studies to see if we had an excess
[17] of cancer or abnormal health effects among our
[18] employees. So if we did have, we could correct
[19] whatever was causing it and make sure that the
[20] employees were properly taken care of.

[21] Q: So you're denying that you ever
[22] participated in a discussion of these topics?

[23] A: That's not the question at all that you've
[24] been asking.

[25] Q: Well, that's what I'm asking now. Do you

1—06:10:35 25—06:11:26

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- [1] deny that you ever discussed these issues, these
[2] liability issues, in connection with whether or not
[3] to do any particular C-8 epidemiology study?
[4] A: I don't remember ever discussing a
[5] liability issue on any health effect study that we
[6] looked at.
[7] It was not my job to discuss liability.
[8] My job was to make sure we were doing the right thing
[9] medically and in a workplace protection sense.
[10] Q: Do you recall hearing anybody discuss the
[11] fact in 1991 that there is a cancer problem at the
[12] site involving leukemia, bladder, kidney, oral
[13] pharynx?
[14] A: No, I don't.
[15] Q: And you see the statement underneath
[16] there? It says "do the study after we are sued." Do
[17] you see that?
[18] A: Yes.
[19] Q: Do you have any understanding as to what
[20] that's referring to?
[21] A: I can surmise what it's referring to but I
[22] don't know whose thought it was, who put it down
[23] there.
[24] Q: What's your understanding as to what
[25] that's —

1—06:11:26 25—06:12:37

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- [1] A: Whoever put it down there was saying,
[2] well, maybe we should do the study after we're sued,
[3] but I didn't put it there. I didn't suggest that and
[4] the Du Pont company would not have suggested that.
[5] Whoever wrote this document may have felt that way.
[6] Q: And underneath that it says "bottom line
[7] something," maybe Dave, says "yes, because of
[8] liability." Underneath that, "no from a medical
[9] position." Do you see that?
[10] A: I see the first sentence you read. I can
[11] see the second but I'm not sure that's what it says.
[12] Q: Is this one of the documents you reviewed
[13] prior to the deposition today?
[14] MR. GREEN: I'm going to instruct him not
[15] to answer that question.
[16] Q: (By Mr. Bilott) Have you ever seen this
[17] document prior to today?
[18] A: No.
[19] Q: Have you ever had any discussions with
[20] anyone — I'm not asking what the content was, but
[21] have you ever had any discussions with anyone about
[22] any meeting to decide whether to do a liver study at
[23] the Washington Works plant?
[24] A: We talked about the liver study we had
[25] already done and I was involved in meetings there —

1—06:12:39 25—06:21:09

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- [1] Q: In 1991?
[2] A: I don't remember subsequent meetings on
[3] that, no.
[4] Q: Do you remember talking with anyone about
[5] such a proposed study since then?
[6] A: No, I don't recall.
[7] Are you through with this one?
[8] Q: Yes.
[9] Again I guess are you aware of anyone at
[10] Du Pont with any responsibility whatsoever for C-8
[11] epidemiology or health studies with the name Kahrr,
[12] K-a-h-r-r, that is anyone other than yourself?
[13] A: No, that's not my name but I'm not
[14] aware —
[15] Q: That sounds like that, anyone else?
[16] A: I'm not aware of anyone else.
[17] MR. BILOTT: We have time for a quick
[18] short break and we'll shift gears on something
[19] else.
[20] (A recess was taken)
[21] Q: (By Mr. Bilott) Dr. Karrh, we just took a
[22] short break and again have you had any discussions
[23] about this deposition at all during any breaks?
[24] A: No.
[25] Q: You mentioned earlier today that you

1—06:21:14 25—06:22:35

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- [1] remembered getting some information from 3M at some
[2] point in time about some studies showing birth
[3] defects in rats. Do you remember that?
[4] A: Yes.
[5] Q: And you were in fact part of a committee
[6] that was set up by Du Pont to handle that issue,
[7] correct?
[8] A: I don't recall specifically how the
[9] committee — how the group was put together, whether
[10] it was actually a committee and whether it was set up
[11] by Du Pont, but I was certainly involved with the
[12] group that was handling that issue, yes.
[13] Q: That was something put together called the
[14] FC-143 communications and coordinating committee. Do
[15] you remember that?
[16] A: No, I don't.
[17] MR. BILOTT: Let's mark this.
[18] (Plaintiffs' Exhibit 29 was marked
[19] for identification.)
[20] Q: (By Mr. Bilott) Dr. Karrh, before we take
[21] a look at this, your understanding, FC-143 was a
[22] designation used for the form of C-8 that Du Pont got
[23] from 3M Company, correct?
[24] A: That's correct.
[25] Q: So when you see references to FC-143,

1—06:22:42 25—06:23:44

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[1] that's referencing C-8, right?

[2] A: In my opinion, yes.

[3] Q: I'm going to hand you what's been marked
[4] as Exhibit 29 and ask you to take a moment to look at
[5] that and tell me if that refreshes your recollection
[6] about the existence of the FC-143 communications and
[7] coordination committee and your involvement on that
[8] committee.

[9] A: This is a document dated March 31, 1981,
[10] titled FC-143 Communications & Coordination
[11] Committee, and it says following are the committee
[12] members, so obviously it's establishing the committee
[13] and it was sent out by Walt Raines from the plastics
[14] department.

[15] Q: And what was Mr. Raines' position with the
[16] plastics department?

[17] A: As I mentioned earlier about
[18] Mr. Serenbetz, Mr. Serenbetz was the coordinator for
[19] all safety, health, and environmental issues for that
[20] department.

[21] Walt Raines was one or two or three people
[22] that worked for Mr. Serenbetz in that role of trying
[23] to make sure that they had all the plant sites
[24] coordinated and what were the responsibilities in the
[25] safety, health, and environmental area as far as

1—06:23:46 24—06:24:27

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[1] meeting the company policy and the company
[2] obligations.

[3] Q: As opposed to being somebody in the
[4] Du Pont corporate medical department, he was somebody
[5] employed within one of the business departments; is
[6] that correct?

[7] A: That's correct.

[8] Q: Could you — on this list there's a
[9] reference to departments, correct?

[10] A: Yes.

[11] Q: And then there's a — the first one, PPD,
[12] is that the —

[13] A: That's the polymer products department,
[14] plastics department.

[15] Q: And —

[16] A: Excuse me just one second. That was the
[17] department that the Washington Works was a part of,
[18] PPD was.

[19] Q: That's the business, so to speak?

[20] A: Yes.

[21] Q: Business folks?

[22] A: Yes.

[23] Q: And below that is C&P. What's that?

[24] A: That's chemical and pigments that was
[25] responsible for running another group of plants of

1—06:24:28 25—06:25:48

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[1] which Chambers Works that you mentioned earlier was
[2] one. Jerry French, F.E. French, was — had the same
[3] job at C&P that Serenbetz had in polymer products,
[4] and Al Palmer had the same job in C&P that Walt
[5] Raines had in polymer products.

[6] Q: Let's go back to PPD just for a minute.

[7] J.T. Smith, what was his function?

[8] A: At that time John was in manufacturing.

[9] At that time I think he was the director of

[10] manufacturing for PPD.

[11] Q: What about N.J. Irsch?

[12] A: Norm Irsch was the production manager who
[13] worked for J.T. Smith and the plant manager would
[14] have reported to Irsch.

[15] Q: So the Du Pont Washington Works plant
[16] manager, their immediate person to report to would
[17] have been Mr. Irsch?

[18] A: Yes.

[19] Q: Who is W.R. DeGraw?

[20] A: I don't know. I don't recall. I may know
[21] but I don't recall.

[22] Q: What about W.K. Nace?

[23] A: Bill Nace was the employee relations
[24] person and at that time I think he was at the
[25] Parkersburg plant as the employee relations person.

1—06:25:52 25—06:26:49

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[1] Q: And H.E. Serenbetz, is that the same
[2] Mr. Serenbetz we had talked about earlier?

[3] A: Yes.

[4] Q: And his position again was?

[5] A: He was the coordinator for all the safety,
[6] health, environmental activities within the PPD
[7] department.

[8] Q: And J.W. Raines is Walt Raines?

[9] A: Yes.

[10] Q: F.N. Aronhalt, who's that?

[11] A: Frank Aronhalt was in sales part of
[12] plastics. I don't know which part of sales. I don't
[13] know what product he was in the sales of but he was a
[14] salesperson in one of those selling — one of the
[15] sales groups for that department.

[16] Q: What about E.D. Champney?

[17] A: I don't know.

[18] Q: And then there's C&P which you defined
[19] what that is and you talked about French and Palmer.
[20] F&F, is that finishings —

[21] A: Fabrics and finishings.

[22] Q: And who are the folks indicated there?

[23] A: Dade and Haaf both were people equivalent
[24] to Palmer or Raines. They were not equivalent to
[25] Serenbetz or French but they were — they worked in

1-06:26:52 25-06:27:47

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[1] the F&F safety, health, and environment group as
[2] coordinators but they were not the head of that
[3] group.
[4] Q: FIBR, is it fiber?
[5] A: Fiber.
[6] Q: What about those folks, Rhodes and Wright?
[7] A: Bob Rhodes and Art Wright, Rhodes was the
[8] equivalent to French and Serenbetz. He had the
[9] responsibility for the fiber department, coordination
[10] of all their safety, health, and environmental
[11] activities. And Art Wright was one of the people who
[12] worked with him in the same role that Raines and
[13] Palmer had.
[14] Q: And then there's INTL. Is that
[15] international?
[16] A: International. Al Haven was the safety,
[17] health, environmental coordinator for international.
[18] He was based in the U.S. but he made sure that plants
[19] outside the U.S. had the same information that plants
[20] in the U.S. had, much as did French and Serenbetz for
[21] their respective departments.
[22] Q: And CR&D?
[23] A: Central research and development, Blane
[24] McKusick was the assistant director of Haskell
[25] Laboratory.

1-06:27:47 25-06:28:40

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[1] Q: That's referencing Haskell?
[2] A: Yes.
[3] Q: And ER?
[4] A: Employee relations.
[5] Q: PA?
[6] A: Public affairs.
[7] Q: What was J.L. Stowell's function?
[8] A: He was the public affairs person.
[9] Q: Was he the head of that?
[10] A: No. He had responsibility — I don't
[11] remember if John had responsibility for PPD
[12] department but he had responsibility in that
[13] department. If you look at the top of the next page,
[14] it says what his role would be on this committee.
[15] Q: And, in fact, on that next paragraph after
[16] the one you were referring to says that you would
[17] serve as the corporate spokesperson for all medical
[18] questions, correct?
[19] A: That's correct.
[20] Q: That was, in fact, your role with respect
[21] to this particular issue?
[22] A: That was one of my roles. I also would
[23] make the medical recommendations and represent the
[24] employee relations functions to this group.
[25] Q: Okay.

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[1] A: Are you through with this one?
[2] MR. BILOTT: Yes.
[3] (Plaintiffs' Exhibit 30 was marked
[4] for identification.)
[5] Q: (By Mr. Bilott) Dr. Karrh, you're being
[6] handed what's been marked as Exhibit 30 and I ask you
[7] to take a look at that and tell me if you can
[8] identify this document.
[9] A: Yes, I can.
[10] Q: And isn't this the document you prepared
[11] and sent to a Mr. De Martino on March 25th of '81
[12] while you were employed at Du Pont?
[13] A: Yes, that's correct, and it's entitled
[14] Ammonium Perfluorooctanoate (FC-143), C-8 Compounds.
[15] Q: And this is the same Mr. De Martino that
[16] you referenced earlier who was one of the people you
[17] reported to; is that correct?
[18] A: Yes.
[19] Q: And his position again at the time in 1981
[20] was?
[21] A: He was — at this time he would have been
[22] vice president of employee relations.
[23] Q: What you're advising him of is the
[24] information that was received indicating that 3M had
[25] some test data indicating potential birth defects

1-06:30:14 25-06:31:16

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[1] here in the eyes of rat fetuses following exposure to
[2] C-8, correct?
[3] A: That's correct.
[4] Q: And you mention that 3M has reported the
[5] information to EPA under Section 8(e) of TSCA, or
[6] will be? I'm sorry.
[7] A: Yes.
[8] Q: It was reported a couple days earlier,
[9] correct?
[10] A: I don't know when but apparently it had
[11] been by the time I wrote this.
[12] Q: You then describe what's going to be done
[13] to follow up on this information at Du Pont and
[14] reference the number of women who are employed who
[15] might have exposure to C-8 in various plants,
[16] correct?
[17] A: Yes.
[18] Q: And you give a brief summary here of what
[19] the plans were going to be after looking a little
[20] more into the data, correct?
[21] A: Yes.
[22] Q: And getting back to the comment here about
[23] 3M having provided an 8(e) report to the U.S. EPA,
[24] were you aware whether 3M in providing information to
[25] EPA about the rat eye defects disclosed to EPA that

1—06:31:25 25—06:32:37

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[1] this particular chemical was in general population
[2] blood?

[3] A: I'm not aware of what their disclosures
[4] were.

[5] Q: Were you part of any effort to make sure
[6] that that type of information about this chemical
[7] which had now been linked to rat birth defects being
[8] present in general population blood was provided to
[9] the EPA?

[10] A: Your question is was I a part of any
[11] discussion of whether 3M had included that —

[12] Q: Yes.

[13] A: I don't recall such a discussion.

[14] Q: You mentioned here in the third paragraph
[15] of your memo when you're talking about the women who
[16] have potential exposure to this chemical, quote, "one
[17] employee who worked in the area had a miscarriage
[18] followed immediately by a normal pregnancy with a
[19] recent normal outcome. Her potential C-8 exposure
[20] throughout both pregnancies were described as, quote,
[21] heavy." Do you see that?

[22] A: Yes.

[23] Q: What was done to follow up on that issue
[24] of what may have been involved with her miscarriage
[25] given that she had heavy C-8 exposure?

1—06:32:40 25—06:33:42

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[1] A: Well, since she had a completely normal
[2] pregnancy following that with still the same
[3] exposure, to my knowledge nothing else was done.

[4] You know, a certain number of miscarriages
[5] happen every year irrespective of anything. And
[6] since she had a completely normal pregnancy following
[7] that and still had the same exposure to C-8 in the
[8] workplace, it was our conclusion as I recall that
[9] there was not a C-8 related condition that related to
[10] her miscarriage.

[11] Q: Now, explain that to me. What convinced
[12] Du Pont that the miscarriage wasn't related in any
[13] way to C-8?

[14] A: The fact that her exposure — her job at
[15] Du Pont was the same with both pregnancies. Her
[16] exposure was described as heavy with both
[17] pregnancies.

[18] The fact that she had the miscarriage and
[19] subsequently had a completely normal pregnancy, a
[20] normal delivery and normal baby, we concluded that
[21] the miscarriage was probably just an event that
[22] happened.

[23] Miscarriages happen. I think about some
[24] 20, 25 percent of pregnancies end in miscarriages.
[25] And so it was our conclusion that there was not a

1—06:33:45 25—06:34:33

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[1] workplace relationship to that miscarriage.

[2] Q: So the only way Du Pont would have
[3] considered that potentially related to C-8 was if she
[4] had continued to have miscarriages?

[5] A: I don't know. We would have had to look
[6] at the evidence at the time, the circumstances. I
[7] don't know what our conclusions would have been but
[8] we made the conclusion then that there was not a
[9] relationship.

[10] Q: Who did? Who specifically looked into
[11] this issue with this one woman at the plant?

[12] A: Well, it would have been Dr. Power at the
[13] plant and probably would have been consulting with me
[14] or one of the assistant medical directors.

[15] I don't specifically remember in this
[16] particular case but it would have been one of us
[17] along with Dr. Power at the plant.

[18] Q: Do you recall ever seeing a report or a
[19] document that summarized this conclusion you just
[20] mentioned about miscarriage somehow not being
[21] relevant to the C-8 —

[22] A: On this particular one lady?

[23] Q: Yes.

[24] A: No.

[25] Q: As of this date, March 25th, 1981, you had

1—06:34:38 25—06:36:23

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[1] information in your possession indicating that C-8
[2] was in the general population blood, in worker blood,
[3] and you also were aware that C-8 was being emitted
[4] from the Du Pont Washington Works plant into the air
[5] and into water and you had just been informed that
[6] this same chemical had been linked with birth
[7] defects. Why was there no 8(e) notice from Du Pont
[8] to the U.S. EPA on that?

[9] MR. GREEN: Could you read that back,
[10] please.

[11] (The record was read by the reporter.)

[12] MR. GREEN: I object to that question on
[13] the grounds it's without foundation.

[14] Q: (By Mr. Bilott) You can —

[15] A: Well, we already knew that 3M had reported
[16] to the EPA under Section 8(e). There was no reason
[17] to send another report because they were — the
[18] conclusion or the key part of your question to me was
[19] the rat — birth defects in the eyes of the rats. 3M
[20] had reported that. There was no reason to report
[21] anything else at that point in time.

[22] Q: 3M had not reported though to the U.S. EPA
[23] that the same chemical was in general population
[24] blood, had they?

[25] A: I don't know. You asked me that question

2-06:36:25 25-06:37:20

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[1] about 10 or 15 minutes ago and I answered then I
[2] don't know.

[3] Q: Wouldn't that be important though for
[4] Du Pont to know that in order to decide whether it
[5] needed to send in its own 8(e) notice?

[6] A: Not necessarily because we didn't have any
[7] reason to think that whatever material was in the
[8] population, in our other employees, or possibly in
[9] the outside population presented a significant risk
[10] and you don't file an 8(e) unless you think there may
[11] be a significant risk.

[12] Q: I want to make sure I understand this.
[13] You're saying you didn't think it presented any
[14] significant risk yet you recommended physically
[15] removing the women who had potential for exposure at
[16] the plant from any further exposure to C-8, correct?

[17] A: Based upon 3M's study that they had
[18] already reported.

[19] Q: So you did see there was a substantial
[20] risk to the woman at the Du Pont plant who were
[21] exposed to C-8, enough to remove them from further
[22] exposure, correct?

[23] A: No.

[24] Q: No?

[25] A: No. There was no potential risk to the

1-06:37:23 25-06:38:31

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[1] women. Based upon the 3M study there was a potential
[2] risk to the fetus.

[3] Q: With that clarification, you were aware
[4] that there was a potential risk to the fetus enough
[5] to remove the women at the plant from further
[6] exposure, correct?

[7] A: That's correct, and that was reported to
[8] 3M — by 3M to TSCA.

[9] Q: What was?

[10] A: The fact that there was some question of
[11] whether it was an embryo toxic material.

[12] Q: Knowing this embryo toxic material was
[13] also present in general population blood, Du Pont
[14] didn't disclose that particular fact to EPA so that
[15] the folks in the general population could look into
[16] whether or not they had any issues as far as removing
[17] themselves from exposure, correct?

[18] MR. GREEN: Objection, asked answered at
[19] least twice or three times.

[20] THE WITNESS: We didn't know that it was
[21] an embryo toxic material. We knew that it had
[22] the potential, according to that 3M study, which
[23] had already been reported to TSCA.

[24] We knew that our employees would have
[25] potential for higher greater exposure to the

1-06:38:33 25-06:39:40

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[1] material than people outside the plant or people
[2] working in other areas of the plant because of
[3] they're having to work with it on a daily basis.

[4] We took the prudent course of action to
[5] protect the fetus of the women who were working
[6] in the area of greatest exposure until we got
[7] further data that indicated to us that it was or
[8] was not an embryo fetal toxic material.

[9] Q: (By Mr. Bilott) But you didn't only
[10] remove women who were exposed above a certain level,
[11] correct, you removed women who had potential for any
[12] exposure to C-8?

[13] A: Women who had potential for any exposure
[14] to C-8 in the workplace where C-8 was being used and
[15] was in the highest concentrations.

[16] Q: But it was any potential exposure to that,
[17] correct?

[18] A: To C-8 in the workplace in the work area
[19] in which C-8 was being used and in which the
[20] potential exposure would be the highest
[21] concentration.

[22] Q: And, in fact, you saw the potential risk
[23] to the fetus as significant enough after receiving
[24] this data to recommend that pregnancy be delayed by
[25] the women who were exposed, correct?

1-06:39:43 25-06:40:40

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[1] A: Show me a document and I'll tell you
[2] whether it's correct or not, sir.

[3] Q: You don't remember making a recommendation
[4] like that?

[5] A: I'd have to see the context of the
[6] document. I'm not sure it's in the context you put
[7] it.

[8] You've had a tendency to take things out
[9] of context. I'd rather see what document you'd like
[10] to refer to.

[11] Q: Well, at this point frankly I'm not
[12] referring to some particular document. I'm just
[13] asking whether based on your recollection you
[14] remember making a medical recommendation to Du Pont
[15] female employees to delay pregnancy after receiving
[16] the information that had come in from 3M about the
[17] birth defect connection?

[18] A: I remember making a recommendation that
[19] women of childbearing capability be taken out of the
[20] area at which they could be exposed to C-8 material
[21] at the levels it persisted in the workplace.

[22] I don't recall if I made a recommendation
[23] that women delay planned pregnancies or not but since
[24] so many pregnancies happen that are unplanned I made
[25] the recommendation that women of childbearing

1—06:40:43 25—06:42:22

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[1] capability be removed from that workplace until we
[2] could determine whether or not there really was an
[3] embryo fetal toxic hazard.
[4] MR. BILOTT: Mark this one, please.
[5] (Plaintiffs' Exhibit 31 was marked
[6] for identification.)
[7] Q: (By Mr. Bilott) Dr. Karrh, you've just
[8] been handed what's been marked as Exhibit 31, ask you
[9] to take a moment to look at this and tell me if you
[10] recall — sorry, tell me if you can identify what
[11] this is.

[12] A: Yes. This is a memo from me to Carl
[13] De Martino, March 27, 1981, titled Ammonium
[14] Perfluorooctanoate (FC-143), C-8 compounds.

[15] Q: You'll notice here under the heading PPD
[16] in your last paragraph you state that, quote,
[17] "background levels, close quote, determined on
[18] Wilmington office employees with no prior exposure to
[19] organic fluoride compounds is 0.0 to 0.38 parts per
[20] million with an average of 0.09 parts per million."
[21] Do you see that?

[22] A: Yes.

[23] Q: Do you know why there's any background
[24] level of this material if there's been no exposure to
[25] the organic fluoride?

1—06:42:24 25—06:43:23

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[1] A: We're all exposed to fluorine compounds of
[2] all kinds many times such as water fluorinated and
[3] things like that. There could be other organic
[4] fluoride compounds out there and that's what we were
[5] trying to determine, was there other — were there
[6] any other organic fluoride compounds that people
[7] could be exposed to that were outside the workplace.

[8] I would have to assume that this means
[9] that — to me this said at the time and I still feel
[10] the same way now, that it means that all of us have a
[11] certain amount of background organic fluoride levels
[12] in our body just from normal daily living and things
[13] that we may be exposed to or the things we eat.

[14] Q: It's Du Pont's understanding — first of
[15] all, you mentioned that organic fluoride come from
[16] water treatment?

[17] A: It can —

[18] Q: That's inorganic, isn't it?

[19] A: It can come from a variety of sources.
[20] I'm just saying that could be an example of maybe
[21] where organic comes from.

[22] Inorganic is the type that's used in water
[23] fluorination treatment but we don't know how that
[24] gets bound up in the body or other things.

[25] Q: So what was Du Pont doing in 1981 to

1—06:43:27 25—06:44:28

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[1] determine how organic fluoride compounds were getting
[2] into background human blood supplies?

[3] A: To my knowledge we were not doing
[4] anything. There was not —

[5] Q: Why not?

[6] A: That was something that was not something
[7] that dealt with our business on a day-to-day basis
[8] and not anything that we would be involved with. If
[9] the public health authorities wanted to do it, then
[10] that would be appropriate for them to do.

[11] Q: In the article we looked at earlier from
[12] Guy and Taves in 1976 they had specifically linked
[13] the organic fluoride to the perfluorinated compounds
[14] that were being used by Du Pont. Did Du Pont do
[15] anything to try to refute or verify that?

[16] A: I think that article suggested that that's
[17] where they're coming from and it didn't say anything
[18] about being used by Du Pont in that article.

[19] Q: Du Pont was well aware it was using that
[20] kind of material, correct?

[21] A: I don't know. I assume we did. We were
[22] using it. I assume we knew that we were using it.

[23] Q: You certainly knew in 1981 you were using
[24] perfluorinated materials, correct?

[25] A: Yes, in 1981.

1—06:44:29 25—06:45:31

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[1] Q: So what was Du Pont doing to either refute
[2] or deny what was out there indicating that the
[3] organic fluorine being found in background blood was
[4] coming from these types of perfluorinated materials?

[5] A: Well, we don't know that it was. We don't
[6] have any — didn't have any reason to think it was
[7] and so therefore it was really not pertinent to what
[8] we were doing.

[9] We were trying to determine did people who
[10] did not have exposure to these perfluorinated
[11] compounds have background levels or organic fluoride
[12] in their body. That's why we had done the study on
[13] the Wilmington office people, was just to see if it
[14] was background level where people did not have
[15] exposure, where they were just picking it up from
[16] everyday life just living.

[17] And so we saw no reason to pursue that.
[18] We could have taken the whole U.S. population and
[19] done organic fluoride blood levels on all of them in
[20] the whole world and try to determine it then but that
[21] would have been a foolish waste of time, money, and
[22] exercise when we had other things that we really had
[23] to deal with.

[24] Q: So that would have been a waste of time
[25] and money at the time?

1—06:45:31 25—06:46:37

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[1] A: To take the whole world population, yes.
[2] Q: To look into general — to look into how
[3] the general population blood was getting contaminated
[4] with this type of organic fluorine?
[5] A: And how would you suggest that be done?
[6] Q: I'm just asking. You said that was viewed
[7] by Du Pont as a —
[8] A: I don't know how to do that study. I
[9] don't think anybody would know how to do it now. And
[10] it was not something — we felt our efforts and our
[11] resources, our people resources and our money
[12] resources could be better spent on making sure that
[13] we were providing a safe and healthful workplace than
[14] on trying to determine why the general population had
[15] organic fluoride levels in their blood.
[16] Q: And even though there was an article out
[17] there from 1976 that suggested — at least the
[18] authors suggested that this organic fluorine included
[19] C-8 and Du Pont had gotten information now indicating
[20] that could possibly be linked with birth defects,
[21] that didn't change the view of Du Pont to go out and
[22] try to figure out how this material was getting into
[23] general population blood?
[24] MR. GREEN: Object to the form.
[25] THE WITNESS: I think I've answered that

1—06:46:38 25—06:47:42

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[1] many, many times, and I don't think that article
[2] specifically said C-8. I think it said
[3] perfluorooctanoate acid.
[4] Q: (By Mr. Bilott) C-6 to C-8?
[5] A: Yes. But I don't think it specifically
[6] said C-8. It did give that range, C-6 to C-8, and
[7] again my answer stands the same as it was.
[8] Q: Okay. At the second page of this
[9] document, the same exhibit, you'll see under C&P, the
[10] second to last paragraph, quote, "3M plans to conduct
[11] a reproductive epidemiologic study to include
[12] fertility and pregnancy outcome for exposed male and
[13] female employees. At present we do not plan an
[14] epidemiologic study but will reevaluate our position
[15] periodically," close quote.
[16] Why was Du Pont not planning its own
[17] epidemiologic study at that point?
[18] A: If 3M was going to do one, there would not
[19] be any reason for us to do one. We were in the
[20] process of doing one at a different plant, a
[21] fertility and pregnancy outcome study, and it was a
[22] very, very difficult study to do. And if 3M was
[23] going to do one, it would be a needless waste of time
[24] and people resources, and our resources were finite,
[25] to do a study if 3M was going to do one that would

1—06:47:43 25—06:49:26

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[1] clarify that.
[2] Q: So it was something that was worth doing
[3] but if 3M was going to do it, you would wait until
[4] they were done with theirs first?
[5] A: It was something that we thought at that
[6] time might help us better define that we were for
[7] sure providing safe and healthful workplaces, and if
[8] 3M was going to do it, we would wait and benefit from
[9] their experience with it and their results, and then
[10] if another study needed to be done, we would consider
[11] at that time whether we should do one.
[12] Q: And, in fact, the Du Pont scientists from
[13] Haskell Lab followed up with the 3M folks, went and
[14] reviewed their data and concluded that the rat eye
[15] defect data was valid in April, just a couple days
[16] later —
[17] A: At one point in time, that's correct.
[18] There's a subsequent document that says it was
[19] concluded that the study was not valid.
[20] (Plaintiffs' Exhibit 32 was marked
[21] for identification.)
[22] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[23] hand you what's been marked as Exhibit 32, ask you to
[24] take a moment to look at that and tell me if you can
[25] identify what that is.

1—06:49:26 25—06:50:29

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[1] A: It's letter from me to Carl De Martino,
[2] dated April the 2nd, 1981, and titled Epidemiology
[3] Study - C-8 (FC-143).
[4] Q: And so you're basically telling your boss
[5] that such an epidemiology study for reproductive
[6] effects in workplace exposures to C-8 could be done
[7] but there were some issues that needed to be
[8] discussed, right?
[9] A: That's correct.
[10] Q: And one of them was the one you just
[11] talked about here, Number 4, that 3M who had been
[12] working on a similar study — working on putting
[13] together a study like that?
[14] A: Developing a protocol is what I said.
[15] Q: Okay. Then at the bottom you basically —
[16] I'm sorry, you propose on behalf of the Du Pont
[17] medical division, quote, "to delay starting such a
[18] study until the Victoria results are obtained in
[19] order to evaluate our ability to do such studies and
[20] at least until 3M has finished developing its
[21] protocol so that we can determine if additional work
[22] is indicated," correct?
[23] A: That's correct —
[24] Q: The Victoria study is the other plant you
[25] were referring to?

1—06:50:29 25—06:51:38

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[1] A: Yes, it is.
[2] MR. BILOTT: Mark that one.
[3] (Plaintiffs' Exhibit 33 was marked for
[4] identification.)
[5] Q: (By Mr. Bilott) I'm sorry. Did I cut off
[6] something you were going to say?
[7] A: Yes. That's fine.
[8] Q: Go ahead. What was it?
[9] A: I just said I had previously answered that
[10] question but — I had previously answered that
[11] question by the answer to the previous question.
[12] Q: All right. Dr. Karrh, I'm handing you
[13] what's been marked as Exhibit 33 and ask you to take
[14] a moment to look at that and tell me if you can
[15] identify what that is.
[16] A: This is a letter from me to Carl
[17] De Martino, dated April 6, titled, Epidemiology
[18] Study - C-8 (FC-143), and it references my previous
[19] letter to him on the same subject of April the 2nd,
[20] 1981.
[21] Q: And what you're referencing there is that
[22] you had earlier said let's delay this study, which we
[23] just looked at, the previous exhibit, but you say
[24] "since then, however, recently obtained information
[25] indicates there may be a need to do such a study,"

1—06:51:42 25—06:52:37

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[1] close quote. What did you mean by that? What new
[2] information?
[3] A: I don't recall what the new information
[4] was but I think the sentence stands by itself. I
[5] obviously had gotten some new information, I don't
[6] recall specifically what it was, that told me that
[7] such a study may be indicated.
[8] Q: Was it, in fact, that 3M had decided not
[9] to do an epidemiological study?
[10] A: I don't recall that being the reason. I
[11] don't recall that it wasn't either. I just don't
[12] recall.
[13] Q: Do you know whether 3M ever in fact ever
[14] did an epidemiological study of its 3-8 exposed
[15] workers for reproductive effects?
[16] A: I don't recall whether they did or not.
[17] Q: Would Du Pont have gone ahead and done its
[18] own study if 3M was doing one?
[19] A: If 3M was doing one?
[20] Q: Yes.
[21] A: I answered that question several questions
[22] ago, that we were going to wait and see if 3M — how
[23] 3M did their study, what the results were and whether
[24] or not there was a need for a further additional
[25] study that we would do rather than just use the

1—06:52:39 25—06:53:54

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[1] results of the 3M study.
[2] Q: So now a couple days later you're saying
[3] you are going to go ahead and do it?
[4] A: No, we're not. I'm saying that recently
[5] obtained information indicates there may be a need to
[6] do such a study. "Medical division epidemiologists
[7] are evaluating how such a study can be accomplished
[8] and are communicating with Parkersburg plant
[9] personnel to determine the number of people who may
[10] be in the group to be studied."
[11] Q: The study was, in fact, though eventually
[12] proposed by Du Pont to do an epidemiological study of
[13] C-8 exposed workers to look for reproductive effects,
[14] correct?
[15] A: I don't know if such a study was proposed
[16] by Du Pont. I think one of the epidemiologists, I
[17] believe Mr. Fayerweather, by that time
[18] Dr. Fayerweather, had asked — had floated a protocol
[19] to see if such a study should be done or could be
[20] done.
[21] Q: Was Mr. Fayerweather not a Du Pont
[22] employee?
[23] A: He was a Du Pont epidemiologist but he was
[24] not the Du Pont company.
[25] Q: But a Du Pont employee put together a

1—06:53:58 25—06:55:31

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[1] protocol for such a study?
[2] A: Proposing such a study, yes.
[3] Q: And, in fact, that was proposed?
[4] A: By him.
[5] (Plaintiffs' Exhibit 34 was marked
[6] for identification.)
[7] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[8] hand you what's been marked as Exhibit 34, ask you to
[9] take a moment to look at that and tell me if you can
[10] identify what that is.
[11] A: This is — it's titled Study of Pregnancy
[12] Outcome in Washington Works Employees: Research
[13] Proposal, by Bill Fayerweather, employee relations
[14] department, medical division, epidemiology section,
[15] and it's got a lot of handwritten notes on the front
[16] of it that I — I don't know whose handwritten notes
[17] they are.
[18] Q: Is this a document you reviewed prior to
[19] the deposition here today?
[20] A: Yes. Sorry.
[21] MR. GREEN: You've got to let me jump in
[22] to object. The question was objectionable.
[23] THE WITNESS: You're absolutely right.
[24] I'm sorry.
[25] Q: (By Mr. Bilott) And do you understand

1—06:55:33 25—06:56:55

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[1] this to be the outline of the study that was proposed
[2] by Mr. Fayerweather to look into pregnancy outcome at
[3] the Washington Works or folks exposed to C-8?
[4] A: Well, I can read you what the objective of
[5] the study would have been according to
[6] Dr. Fayerweather, the study's objectives are to
[7] determine whether the pregnancy outcome among female
[8] Washington Works employees is casually related to
[9] their occupational exposure to C-8 and, B, pregnancy
[10] outcome among wives of Washington Works employees is
[11] causally related to their husbands' exposure to C-8.

[12] Q: In fact, in this particular proposal on
[13] Page EID106200, at the very bottom right-hand corner,
[14] do you see that?

[15] A: Yes.

[16] Q: There's a section here dealing with
[17] statistically significant excesses and there's a
[18] reference to the national incidence rate for
[19] craniofacial malformations is about two per 1,000
[20] live births and the rate for malformations of all
[21] types is about 20 per thousand.

[22] Do you understand, first of all, what's
[23] being referenced here as craniofacial malformations?

[24] A: I don't know exactly what falls into that
[25] category of craniofacial malformations. I know what

1—06:57:00 25—06:58:08

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[1] craniofacial area is.

[2] Q: And what is that area?

[3] A: That's the entire head area.

[4] Q: And that's Du Pont had determined that the
[5] national rate, incidence rate, for those types of
[6] malformations in human babies was about two out of a
[7] thousand; is that right?

[8] A: Well, Dr. Fayerweather had determined by
[9] looking at national data apparently.

[10] Q: And then it says "given these background
[11] rates, Table III shows the minimum number of births
[12] with malformations that must be observed in the study
[13] group to say that there is a statistically
[14] significant excess." And what do you understand that
[15] reference to p less than 0.05?

[16] A: Probability factors of less than .05,
[17] which means less than one in 20.

[18] Q: "For instance, two malformations in ten
[19] exposed live births is a significantly higher rate
[20] than a national rate of two per a thousand." Do you
[21] see that?

[22] A: Yes.

[23] Q: And, in fact, there's a chart attached,
[24] Mr. Fayerweather's proposal here. It's the very last
[25] page of this exhibit, Table III. See the heading

1—06:58:16 24—06:59:39

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[1] there, Minimum Number of Malformations Needed to Show
[2] Statistical Significance, and there's a column
[3] minimum number of births with malformations that must
[4] be observed in the study group to be significantly
[5] higher than the national incidence, given a study
[6] group with N variable live births and if there's a
[7] group — indicated in this chart here, if there's a
[8] group of, for instance, five live births, one
[9] malformation would be statistically significant, and
[10] if there was a group — for craniofacial defects. If
[11] the group was ten live births, two or more was
[12] significantly higher than the national rate. Do you
[13] see that?

[14] A: I see where it says that, yes.

[15] Q: As of April 13th, 1981, Mr. Fayerweather
[16] at Du Pont in the epidemiology department was aware
[17] that if Du Pont, through looking at pregnancy outcome
[18] at the Washington Works plant, found one out of five
[19] craniofacial birth defects in its C-8 exposed
[20] employees, that was a statistically significant
[21] excess over the national rates, correct?

[22] MR. GREEN: Object to the form.

[23] THE WITNESS: Well, the document speaks
[24] for itself. It says the minimum number of
[25] births with malformations that must be observed

1—06:59:43 25—07:00:46

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[1] in the study group to be significantly higher
[2] than the national incidence.

[3] Q: (By Mr. Bilott) With that clarification,
[4] that's the amount that would be needed to show a
[5] number that was significantly higher than the
[6] national rate, correct?

[7] A: Than the national incidence, yes.

[8] Q: And if two or more craniofacial
[9] malformations were found in a group of ten or more
[10] live births, that also would be significantly higher
[11] than the national incidence rate, correct?

[12] A: That would be the minimum number of births
[13] with malformations that must be observed in the study
[14] group to be significantly higher than the national
[15] incidence.

[16] Q: And this, as indicated in the title for
[17] Table III, was the minimum number of malformations
[18] needed to show statistical significance for purposes
[19] of evaluating the objectives mentioned on the first
[20] page which is to determine whether pregnancy outcome
[21] among the female Washington Works employees is
[22] causally related to their occupational exposure to
[23] C-8, correct?

[24] A: That's what it says? Yes.

[25] Q: So what did Du Pont do to look into

1—07:00:58 25—07:02:06

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[1] whether there were any craniofacial malformations
[2] among Du Pont female employees exposed to C-8?
[3] A: As I recall, we talked with Dr. Power to
[4] find out how many employees, female employees, that
[5] work in the area had had pregnancies and what were
[6] the pregnancy outcome on that, and I got the data
[7] back from him on that and then made some
[8] determinations from there.

[9] Q: And, in fact, Du Pont went forward as
[10] proposed here in this protocol and got blood samples
[11] from those women for C-8, correct?

[12] A: The plant got blood samples. We did not
[13] in Wilmington get blood samples.

[14] Q: But Du Pont got —

[15] A: Washington Works —

[16] MR. GREEN: Object to the form. I mean,
[17] this is getting a little ridiculous with this
[18] Du Pont stuff.

[19] MR. BILOTT: Is that an objection to form?

[20] MR. GREEN: Yes.

[21] MR. BILOTT: Thank you.

[22] Q: (By Mr. Bilott) Du Pont company,
[23] employees of Du Pont got C-8 blood data for the women
[24] exposed to C-8 at the Washington Works plant,
[25] correct?

1—07:02:06 25—07:03:28

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[1] A: Apparently the Du Pont Washington Works
[2] plant got blood levels of C-8 for women who were
[3] pregnant who were exposed to C-8 in the workplace.

[4] Q: You aren't saying that you didn't see that
[5] blood data, are you?

[6] A: I saw the blood data later. I did not see
[7] it right at that time.

[8] Q: You saw it when it was generated though
[9] and sent to the plant, didn't you?

[10] A: It was generated at the plant and I saw it
[11] when it was sent to me.

[12] Q: And, in fact, you got copied on the blood
[13] data summaries when they were sent to the plant,
[14] weren't you?

[15] A: I think the plant generated the data and
[16] sent it us, sent it to me. I saw the data, if that's
[17] what you're asking.

[18] (Plaintiffs' Exhibit 35 was marked for
[19] identification.)

[20] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[21] hand you what's been marked as Exhibit 35 and ask you
[22] to look at that and tell me if you understand what
[23] that is.

[24] A: This is a paper that's titled Outline of
[25] C-8 Blood Sampling Programs, the first page.

1—07:03:31 25—07:04:35

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[1] Q: If you notice — I'm sorry to interrupt
[2] here but just to clarify the question, do you
[3] recognize this as a Du Pont-generated document from
[4] April of 1981 from an L.F. Percival as indicated on
[5] the last page?

[6] A: It looks like that's who it's from, yes.

[7] Q: Are you familiar with somebody with that
[8] name at Du Pont?

[9] A: Yes.

[10] Q: Who's that?

[11] A: Lance Percival was one of the people who
[12] was in one of the departments, safety, health, and
[13] environmental groups, and then I think Lance went to
[14] Haskell Laboratory to work in the industrial hygiene
[15] group and I don't know when he went there. I don't
[16] know whether he was still in the operating department
[17] at this time or whether he was at Haskell at this
[18] time.

[19] Q: And Mr. Percival was providing an outline
[20] of a C-8 blood sampling program where he states in
[21] the first paragraph, quote, "the sampling program to
[22] determine levels of C-8 in employees' blood has
[23] several purposes. These are listed below in order of
[24] priority." Do you see that?

[25] A: Yes.

1—07:04:36 25—07:05:38

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[1] Q: And then the item listed at the bottom of
[2] the page, "Washington Works - Various Groups, provide
[3] data for pregnancy outcome study and confirm
[4] background level," do you see that?

[5] A: Yes.

[6] Q: And, in fact, Du Pont went ahead and
[7] started gathering the C-8 blood data for the
[8] pregnancy outcome study, correct?

[9] A: Du Pont got blood data on the women who
[10] were pregnant who were in the C-8 area and got — I
[11] think I've already answered that question a couple
[12] times.

[13] Q: Referring back up to the first paragraph,
[14] Mr. Percival says in the third sentence "it is felt
[15] that an overall communication of intent of program
[16] would have a negative impact at this time." Do you
[17] see that?

[18] A: Yes.

[19] Q: Do you have an understanding as to what
[20] he's referring to there?

[21] A: No.

[22] Q: Do you recall participating in any
[23] discussions in which anybody raised concerns about
[24] disclosing to Du Pont employees why their blood was
[25] being tested for C-8?

1—07:05:40 25—07:07:00

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[1] A: No.

[2] Q: The protocol that we looked at which was
[3] Exhibit 34 for the pregnancy outcome study at
[4] Washington Works plant was, in fact, eventually
[5] submitted for approval, correct?

[6] A: I don't know if that's correct. I don't
[7] know that it's not correct.
[8] (Plaintiffs' Exhibit 36 was marked
[9] for identification.)

[10] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[11] hand you what's been marked as Exhibit 36 and ask you
[12] to look at that and tell me if you can identify what
[13] that document is.

[14] A: It's a document dated April 15, 1981,
[15] entitled Ongoing C-8 Programs, Washington Works, from
[16] Harold Serenbetz to several addressees.

[17] Q: Including yourself, correct?

[18] A: Yes.

[19] Q: Do you recognize this as a document
[20] generated by Du Pont employees in April of 1981?
[21] Employee. I'm sorry.

[22] A: It was generated apparently by
[23] Mr. Serenbetz who was a Du Pont employee and it was
[24] generated April the 15th, 1981.

[25] Q: And he's summarizing information for

1—07:07:03 25—07:08:02

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[1] various people, including yourself here, on the
[2] ongoing C-8 programs, and Item C on the list is
[3] "Pregnancy Outcome Epidemiology - a proposal by the
[4] medical division has been submitted for preliminary
[5] review." Do you see that?

[6] A: Yes.

[7] Q: Do you recall ever getting the protocol
[8] for review?

[9] A: What we've looked at maybe four documents
[10] ago was the protocol that was for preliminary review.

[11] Q: And did you review it?

[12] A: Yes.

[13] Q: What were your comments on it?

[14] A: I don't remember what comments I made. I
[15] talked to Fayerweather about it after I reviewed it
[16] but I don't remember what they were.

[17] Q: Did you see any medical reason not to go
[18] forward with that?

[19] A: I'd have to sit down and review that
[20] completely again and to start all over again. Right
[21] now I can't remember whether I did or didn't.

[22] I've told you the reasons that we were
[23] reluctant to go forward with the study several times
[24] in answering your questions. One was 3M was
[25] proposing a study and planned to do it. Two was we

1—07:08:05 25—07:09:17

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[1] were very involved in a very complicated similar
[2] study at another plant site that we were not sure we
[3] could get good data out of. And third we didn't have
[4] right then the people resources we could put on doing
[5] it right at that point in time because we had the
[6] other study ongoing.

[7] Q: And, in fact, while this particular formal
[8] study protocol was under review Du Pont actually
[9] acquired information that two children born to female
[10] employees at the Washington Works plant who had been
[11] exposed to C-8 did in fact have craniofacial birth
[12] defects, correct?

[13] MR. GREEN: Object to the form of the
[14] question.

[15] Q: (By Mr. Bilott) Is that correct?

[16] A: I'm not sure that that's correct. We got
[17] information that there were two questionable birth
[18] defects in children that were born to women who had
[19] worked in the C-8 area of Washington Works. I don't
[20] remember that I would describe them as craniofacial.

[21] I don't know — as I mentioned when I
[22] answered your question earlier, I don't know exactly
[23] how the people who classify diseases classify
[24] craniofacial except it had to do somewhere with the
[25] head and face.

3—07:10:47 25—07:12:06

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[1] (A recess was taken)
[2] (Plaintiffs' Exhibit 37 was marked
[3] for identification.)

[4] Q: (By Mr. Bilott) Dr. Karrh, we were just
[5] talking about information that became known to you
[6] with respect to two female employees at the
[7] Washington Works plant who had been exposed to C-8
[8] having children born with birth defects of some kind?

[9] A: Of some kind, yes.

[10] Q: And you became aware of that, correct?

[11] A: Yes.

[12] Q: At about the time this particular program
[13] was underway, correct?

[14] A: I don't remember the time frame. I'm not
[15] sure I know what this particular program you're
[16] referring to. It was sometime in that '81 period of
[17] time as I recall.

[18] Q: It was during the time that Du Pont was
[19] taking action to try to collect C-8 blood samples
[20] from the exposed women and to review their medical
[21] records?

[22] A: That's correct.

[23] Q: I'm going to hand you what's been marked
[24] as Exhibit 37, ask you to take a look at that and
[25] tell me if you can identify this as a document that

1—07:12:09 25—07:13:44

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[1] was sent to you among other people on April 13th,
[2] 1981, from a J.W. Raines.
[3] A: From J.W. Raines to J.T. Smith, April 13,
[4] 1981, to several carbon addressees, titled Ammonium
[5] Perfluorooctanoate (FC-143), Ongoing Program.
[6] Q: And you'll notice in the Item Number 1
[7] with respect to that ongoing program there's an item
[8] of employee communication, quote, "Washington Works
[9] is considering additional employee communications
[10] dealing with our strong recommendation to female
[11] employees against considering sterilization for job
[12] reasons and the reported birth of a child with birth
[13] defects to two female employees who worked in the
[14] FC-143 area." Do you see that?
[15] A: Yes.
[16] Q: Again do you recall what specifically was
[17] done to follow up and investigate what types of birth
[18] defects these two children had?
[19] A: My recollection is I went back to
[20] Dr. Power and asked him what were these defects and
[21] as I recall I got a list of all the women who had
[22] worked in the area that had pregnancies and when
[23] their child delivered and what was the outcome of
[24] that, including these two.
[25] Q: And so the information was provided to you

1—07:13:47 25—07:15:21

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[1] by Dr. Power?
[2] A: As I recall, that's correct.
[3] Q: Do you recall what Dr. Power told you
[4] about what types of birth defects these were?
[5] A: No, I don't specifically.
[6] (Plaintiffs' Exhibit 38 was marked
[7] for identification.)
[8] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[9] hand you what's been marked as Exhibit 38 in your
[10] deposition and ask you if you can identify this as a
[11] Du Pont-generated document from May 26, 1981, sent to
[12] a number of folks, including yourself, from a R.D.
[13] Ingalls at Du Pont?
[14] A: Yes. This is titled C-8 Program Status,
[15] and it is on Du Pont letterhead.
[16] Q: And in this particular document
[17] Mr. Ingalls is providing summary of where various
[18] activities are at that point in time with respect to
[19] the C-8 program that we've been talking about,
[20] correct?
[21] A: That's what it appears to be.
[22] Q: And by the way who is J.H. Todd? Was he
[23] the plant manager at the time at Washington Works?
[24] A: Yes.
[25] Q: In the memo here from Mr. Ingalls on blood

1—07:15:28 25—07:16:40

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[1] sampling results he references an Attachment III
[2] which is a summary of the sampling results available
[3] through May 14th. Do you see that?
[4] A: Yes.
[5] Q: If we could flip to Attachment III — let
[6] me put it this way. Let's flip to the third of the
[7] last page of the attachments here.
[8] A: C-8 blood sampling results?
[9] Q: Yes. It says up at the top "revised May
[10] 14th, 1981." Do you see that?
[11] A: Yes.
[12] Q: Was this the chart you were referring to
[13] before that provided information about what types of
[14] birth defects?
[15] A: Yes, I have seen this chart.
[16] Q: And was this one of the documents you
[17] reviewed prior to your deposition today?
[18] MR. GREEN: Object and instruct you not to
[19] answer that question.
[20] Q: (By Mr. Bilott) Have you ever seen this
[21] document prior to today?
[22] A: Yes. I saw this document when it was
[23] generated.
[24] Q: Do you remember reviewing it at any point
[25] in time since then?

1—07:16:41 25—07:18:05

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[1] A: I have may have reviewed it since then. I
[2] don't recall specifically when.
[3] Q: In this particular document what did you
[4] understand as far as the information being conveyed
[5] here under the column status, what type of
[6] information was being provided?
[7] A: Well, under status it was saying what was
[8] the pregnancy outcome. The first child was a normal
[9] child born June 1980. The mother had been
[10] transferred out of the fluorocarbons area prior to
[11] the birth, actually prior to the pregnancy.
[12] The second one was a normal child born
[13] April '81. The third was a normal child born April
[14] '81, and on that one they did an umbilical cord blood
[15] level for C-8. The next one the mother was five
[16] months pregnant. The next one the mother was five
[17] months pregnant. One child that was two years plus
[18] with an unconfirmed eye and tear duct defect, and
[19] then the last one would be a child four months old
[20] with one nostril and eye defect.
[21] Q: So you understand this to be providing
[22] information with respect to five children that had
[23] been born to women at the Washington Works plants who
[24] had been exposed to C-8?
[25] A: That's my understanding.

1—07:18:07 25—07:19:15

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[1] Q: And what was being provided here was
[2] information indicating eye and tear defect
[3] unconfirmed with one child and a nostril and eye
[4] defect in another, correct?
[5] A: Yes, that's correct.
[6] Q: And I think under your definition of
[7] craniofacial is a nostril defect a defect in the
[8] craniofacial?
[9] A: As I've said a couple times, I don't know
[10] exactly when the people put together that term
[11] craniofacial as far as what they included, but I
[12] would think that it would be because it's inside the
[13] cranial area and the facial area, that it would be
[14] part of the craniofacial area.
[15] Q: So as of May 14th, 1981, information
[16] existed indicating that at least one out of the five
[17] live births to these women involved a child who had a
[18] facial birth defect?
[19] A: You're referring to one nostril and eye
[20] defect?
[21] Q: Yes.
[22] A: Yes.
[23] Q: Looking at the protocol that Du Pont had
[24] put together by Mr. Fayerweather where he had said
[25] that if you find one out of five live births with a

1—07:19:20 25—07:20:19

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[1] craniofacial defect, that was a significant excess,
[2] what did Du Pont do to report that to anyone?
[3] A: We went back to the plant to Dr. Power and
[4] asked him to go back and get more information on this
[5] and apparently he did that and I don't recall what
[6] the outcome on that was.
[7] We apparently were satisfied that this was
[8] not caused by the workplace exposure.
[9] Q: What do you personally know that he did to
[10] follow up on that?
[11] A: I don't personally know exactly what he
[12] did. We went back to him and asked him to follow up
[13] on it and he did and came back saying that he did not
[14] think it was related.
[15] Q: How do you know that he did do any
[16] follow-up?
[17] A: Because he told me he did.
[18] Q: What specifically did he tell you he did?
[19] A: I don't remember what he said he
[20] specifically did. He went back and followed up with
[21] the mother and with the child and I don't know if he
[22] went to the treating physicians or not.
[23] Q: And he confirmed that there was a birth
[24] defect in that child, correct?
[25] A: He confirmed — as far as I can tell,

1—07:20:23 25—07:21:30

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[1] Dr. Power was instrumental in putting this together
[2] and so he was aware of this. I'm not sure that he
[3] confirmed it necessarily but he was aware that this
[4] was put together.
[5] Q: And Dr. Power in fact confirmed the other
[6] eye and tear duct defect too, didn't he?
[7] MR. GREEN: Object, no foundation.
[8] Q: (By Mr. Bilott) Do you know that?
[9] A: No, I don't know that. I know that he had
[10] some involvement in putting this together and we went
[11] back to him and asked him to find out more
[12] information on those two.
[13] Q: With respect to the child who's referenced
[14] here as unconfirmed eye and tear duct defect, what
[15] did Dr. Power do to confirm that or deny it?
[16] A: Well, as I answered two or three questions
[17] ago, I don't know. At this point in time I don't
[18] recall specifically what he did, but he went back and
[19] evaluated it in some way and then came back to me
[20] that he was satisfied it was not related to the
[21] workplace.
[22] Q: Now, do you recall seeing anything in
[23] writing providing that information you just said,
[24] that his — whatever it was that Dr. Power relied on
[25] to think these were not somehow related to C-8?

1—07:21:33 25—07:22:51

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[1] A: I don't recall seeing anything in writing
[2] to that effect. I may have. I just don't recall it.
[3] Q: And you don't personally know what he
[4] actually did, correct?
[5] A: I think I've answered that a couple times.
[6] No, I don't per se know what he actually did.
[7] Q: Given the importance of having found one
[8] confirmed and one at least unconfirmed as of this
[9] date birth defects out of five births in these
[10] Washington Works female employees, didn't you think
[11] that was important enough to make sure a written
[12] document was generated making sure that everything
[13] that needed to be done to follow up and confirm or
[14] deny these defects was done?
[15] A: We felt that we did. We went back to the
[16] plant physician, asked him to follow up on it. He
[17] followed up on it. He felt satisfied that it was not
[18] related to the workplace. It was no reason to
[19] generate a report on it as such once he had confirmed
[20] that and he felt comfortable it was not related.
[21] Q: What did he tell you with respect to why
[22] he thought either of these were somehow not related?
[23] A: I don't recall specifically what he told
[24] me. I recall that he told me that he did not feel
[25] they were related to the workplace exposures.

1—07:22:53 25—07:24:00

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[1] Q: Did you ever talk to either of the women
[2] who had these children?

[3] A: No.

[4] Q: Did you ever see these children?

[5] A: No.

[6] Q: Did you ever find out what these women did
[7] with respect to their exposure to C-8?

[8] A: The plant followed back up with that with
[9] Dr. Power and the people at the plant to find out
[10] what their jobs had been and what their potentials
[11] were and it shows there what their blood levels had
[12] been, but I did not personally go back to look at
[13] their job assignment.

[14] Q: For instance, did Dr. Power provide any
[15] information with respect to one of these women
[16] physically sitting over an open sump with C-8 in it
[17] as part of her job?

[18] A: That was never told to me.

[19] Q: With one of the women going in and
[20] cleaning out a C-8 clave or barrel, c-l-a-v-e, and
[21] chipping away the materials?

[22] A: I was not told that specifically. I just
[23] asked to find out — I asked Dr. Power and the plant
[24] to go back and find out what their jobs were and
[25] whether or not they thought there was a relationship

1—07:24:02 25—07:25:04

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[1] to the potential defects that might be related to the
[2] exposure.

[3] Q: What's your understanding of what
[4] Dr. Power's credentials or qualifications were in
[5] order to make that kind of assessment as far as
[6] whether these birth defects were causally related to
[7] C-8?

[8] A: Dr. Power was a very well-qualified
[9] occupational physician that had been at that plant
[10] for years.

[11] He was at the plant — he was at that
[12] plant when I first came to work with the Du Pont
[13] company and he was still at that plant when I retired
[14] from the company.

[15] He had spent his almost entire working
[16] career at that plant so he had an awful lot of
[17] knowledge of the plant, the workplace conditions, the
[18] local medical community, the doctors in the
[19] community, he had good contacts with them. So I felt
[20] comfortable that Dr. Power would do an appropriate
[21] follow-up on that when I asked him to follow up on
[22] it.

[23] Q: And you described for us earlier today and
[24] I think you mentioned that your article that we have
[25] marked as one of the exhibits laid out the way in

1—07:25:09 25—07:27:23

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[1] which Du Pont, through its epidemiology program, its
[2] other data-gathering activities, would go about
[3] proving or disproving a causal connection between
[4] health effects and a particular chemical at Du Pont,
[5] correct?

[6] A: I think we discussed that this morning,
[7] yes.

[8] Q: And that part of that would be to go and
[9] do some sort of thorough assessment of the
[10] connections?

[11] A: Yes.

[12] Q: And you're saying that was done?

[13] A: I'm saying that Dr. Power did that, that
[14] at my request he went back and evaluated that and he
[15] was satisfied there was no workplace connection with
[16] it.

[17] Q: And you're not aware as we sit here where
[18] the results of that is?

[19] A: No, I'm not.

[20] MR. GREEN: Let's call it a day.

[21] MR. BILOTT: Hold on one second here.

[22] (Plaintiffs' Exhibit 39 was marked
[23] for identification.)

[24] Q: (By Mr. Bilott) Again did you ever —
[25] Dr. Karrh, I'm going to hand you Exhibit 39 and ask

1—07:27:28 25—07:28:34

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[1] you if you recall ever seeing photographs of this
[2] particular child before?

[3] A: No, I don't.

[4] Q: And again were you ever provided any
[5] photographs of either of these two children from the
[6] Du Pont Washington Works plant with the birth
[7] defects?

[8] A: The two that were referenced in the
[9] previous documents?

[10] Q: Yes.

[11] A: No.

[12] Q: If you take a look at this particular
[13] photograph, I'd like to just point your attention
[14] here to the baby in the photo, and if you could take
[15] a look at the nose and the eye.

[16] In your professional opinion as a medical
[17] doctor do you see a physical defect there, a
[18] craniofacial defect in this child?

[19] A: The child has only one nostril.
[20] Apparently the right nostril is absent and it looks
[21] like there's some growth on the inner surface of the
[22] right eye, on the medial surface.

[23] (Plaintiffs' Exhibit 40 was marked
[24] for identification.)

[25] Q: (By Mr. Bilott) Dr. Karrh, I'm going to

1—07:29:06 25—07:30:36

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[1] hand you Exhibit 40. Again it's a photograph of the
[2] same child and it has a little better clearer kind of
[3] a more close-up view of that same facial area and
[4] again it's consistent with your medical opinion that
[5] those are craniofacial defects there?

[6] MR. GREEN: Object to the form. I think
[7] it also mischaracterizes the prior testimony.

[8] Q: (By Mr. Bilott) Would it be your medical
[9] opinion that that is a craniofacial defect?

[10] A: He has a defect in the craniofacial area,
[11] one of the nostril and one of the right eye, the
[12] medial side of the right eye.

[13] Q: Do you know the extent to which Du Pont
[14] participated in or assisted in any way with any of
[15] the dozens of surgeries to this child since his
[16] birth?

[17] A: I was not aware the child had had dozens
[18] of surgeries. I'm not aware of how Du Pont may or
[19] may not have participated.

[20] MR. BILOTT: Mark those last two.
[21] (Plaintiffs' Exhibits 41 and 42 were
[22] marked for identification.)

[23] Q: (By Mr. Bilott) Dr. Karrh, I'm going to
[24] hand you Exhibits 41 and 42. Do you recall ever
[25] seeing either of these before?

1—07:30:37 25—07:32:07

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[1] A: I haven't seen 41 before nor have I seen
[2] 42 before.

[3] Q: Looking at 41, again what's your medical
[4] opinion as to what kind of problem is on that smaller
[5] child's face?

[6] A: I'm not an expert witness so I can't
[7] answer that —

[8] Q: Your opinion.

[9] A: My opinion is that he now has had a right
[10] nostril constructed obviously. He still has some
[11] abnormality of the right eye, looks like instead of
[12] being medial it's inferior now, moving down below the
[13] right eye, but I can't make an expert opinion on it
[14] because I'm not a pediatrician.

[15] Q: You mentioned that Dr. Power did something
[16] to follow up with these two children with the birth
[17] defects to satisfy himself that they were somehow not
[18] related to C-8, and what's your understanding of how
[19] that would have to be done, to confirm that it's not
[20] related to this particular chemical?

[21] A: Well, you go back and look at the jobs
[22] that the mother would have had, the potential
[23] exposure that she would have had, the various factors
[24] about the workplace in which she could possibly have
[25] been exposed and then you have to make your best

1—07:32:10 25—07:33:11

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[1] judgment based upon the industrial hygiene data and
[2] the workplace exposure data as to whether or not
[3] there could be a relationship.

[4] Q: Do you know whether Dr. Power made any
[5] determination as to whether he thought these defects
[6] were caused by some other chemical at Du Pont or
[7] otherwise?

[8] A: I don't recall him telling me that but not
[9] all birth defects have to have a chemical cause. A
[10] large number of birth defects occur naturally. I
[11] don't know what the percentage is but there's a
[12] fairly large percentage. And so you don't have to
[13] always have some chemical exposure to have a birth
[14] defect.

[15] Q: But we're not sure how he ruled out C-8 at
[16] this point?

[17] A: I could not give you the specifics of it,
[18] no.

[19] Q: Have you spoken with Dr. Power since this
[20] time period in 1981 about how he made this decision?

[21] A: I've spoken with him many times but I
[22] don't recall speaking with him about how he made that
[23] decision.

[24] He went back and did the evaluations that
[25] were asked of him, that I asked for him to make. He

1—07:33:13 25—07:34:11

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[1] came back to me and he was satisfied that it was not
[2] workplace related. He satisfied me and we moved on
[3] to other things that we were doing.

[4] Q: Given the level of activity at Du Pont
[5] over this issue at the time, didn't you ask for
[6] something in writing to be put in a file somewhere
[7] to — this is a pretty critical issue about whether
[8] these are related to C-8.

[9] A: I think I've answered that a couple times
[10] and I don't recall getting something in writing.

[11] Q: You recall asking for anything to be put
[12] in writing?

[13] A: I don't recall that I asked for anything.
[14] I asked him to make an evaluation, make a
[15] determination and come back to me and tell me if he
[16] thought they were related to C-8 exposure or not.

[17] Q: And did you review his work to make sure
[18] that was correct?

[19] A: I reviewed it with him. I had no reason
[20] to doubt what he was doing was correct.

[21] Q: But he gave you nothing in writing to make
[22] that evaluation of what he was doing?

[23] A: For the third or fourth or fifth time, I
[24] don't remember seeing anything in writing.

[25] Q: So this was a telephone call with him?

1—07:34:14 10—07:34:34

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[1] A: Yes.

[2] Q: All that was done was just making a phone
[3] call, he tells you that he thinks it's not related,
[4] and that was the end of it?

[5] A: My recollection is he and I talked about
[6] it over the telephone. He told me he didn't think it
[7] was related, and I asked him what he'd done. He told
[8] what he had done as far as going back and I was
[9] satisfied with what he told me.

[10] MR. BILOTT: I think we can end for today.
[11] (Deposition adjourned at 4:40 p.m.)
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[6] 2	Document entitled Genetic Screening 69 and the Handling of High-Risk Groups in the Workplace	
[7] 3	Document entitled A Company's Duty to Report Health Hazards	78
[8] 4	Document entitled The Critical Balance: The Influence of Government Regulation, Past and Present	94
[9] 5	Document entitled Abstracts: Fifteenth Annual Meeting	106
[10] 6	Document dated December 3, 1976, addressed to B.W. Karrh, M.D., from Richard Graham	110
[11] 7	Document dated December 16, 1976, addressed to Frank A. Ubel, M.D., from Bruce W. Karrh, M.D., with attachments	113
[12] 8	Handwritten document as discussed	114
[13] 9	Document dated 5/15/78, addressed to Frank A. Bower from Ray Morrow, with attachments	116
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- [1] 11 Document dated March 15, 1979,
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- [2] Pell, with attachment
- [3] 12 Document dated June 27, 1978, 146
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- [4] Superintendents, Chief Chemists,
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- [6] 13 Document dated August 9, 1978, 152
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- [7]
- [8] 14 Document dated September 18, 1978, 154
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- [9] attachment
- [10] 15 Document dated December 22, 1978, 160
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- [12] 16 Document dated July 18, 1979, 164
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- [16] 18 Document dated July 23, 1979, 170
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- [18] 19 Document dated July 25, 1979, 172
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- [20] 20 Document dated July 30, 1979, 177
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- [22] 21 Document dated August 28, 1979, 183
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- [3] 23 Document dated January 28, 1980, 188
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- [6] 24 Document dated June 9, 1980, 190
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- [8] 25 Document dated January 28, 1981, 192
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- [13] 28 Handwritten document as discussed 209
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- [16] 30 Document dated March 25, 1981, 225
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- [20] 32 Document dated April 2, 1981, 241
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- [22] 33 Document dated April 6, 1981, 243
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[1] 34 Document entitled Study of 246
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[4] 35 Document entitled Outline of C-8 252
[5] Blood Sampling Program
[6] 36 Document dated April 15, 1981, 255
[7] entitled Ongoing C-8 Programs,
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(Original Exhibits 1 through 42 have been
attached to the original transcript.)

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[1] (Pursuant to Rule 30(e) of the Federal
[2] Rules of Civil Procedure and/or O.C.G.A.
[3] 9-11-30(e), the deponent and/or a party having
[4] requested the right to review the deposition,
[5] making corrections and/or changes and signing,
[6] for that purpose the errata pages have been
[7] annexed hereto.)
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CERTIFICATE

STATE OF GEORGIA:
COUNTY OF CHATHAM:

[1] I hereby certify that the foregoing
[2] transcript was taken down, as stated in the
[3] caption, and the questions and answers thereto
[4] were reduced to typewriting under my direction;
[5] that the foregoing pages 1 through 275 represent
[6] a true, complete, and correct transcript of the
[7] evidence given upon said hearing, and I further
[8] certify that I am not of kin or counsel to the
[9] parties in the case; am not in the regular
[10] employ of counsel for any of said parties; nor
[11] am I in anywise interested in the result of said
[12] case.
[13]
[14]
[15]
[16]
[17]

[18] This, the 12th day of May, 2004.
[19]
[20]

[21] Mynjuan P. Jones, B-1422
[22]
[23]
[24]
[25]

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[1] COURT REPORTER DISCLOSURE
[ORIGINAL ON FILE]

[2]

[3] DEPOSITION OF: BRUCE W. KARRH, M.D.

[4] Pursuant to Article 8.B. of the Rules and
Regulations of the Board of Court Reporting of the
Judicial Council of Georgia which states: "Each court
reporter shall tender a disclosure form at the time
of the taking of the deposition stating the
arrangements made for the reporting services of the
certified court reporter, by the certified court
reporter, the court reporter's employer, or the
referral source for the deposition, with any party to
the litigation, counsel to the parties or other
entity. Such form shall be attached to the
deposition transcript," I make the following
disclosure:

[10] I am a Georgia Certified Court Reporter. I am
here as a representative of Brown Reporting, Inc.

[11] Brown Reporting was contacted by the offices of
Taft, Stettinius & Hollister LLP

[12] to provide court reporting services for the
deposition. Brown Reporting will not be taking this
deposition under any contract that is prohibited by
O.C.G.A. 15-14-37(a) and (b).

[14] Brown Reporting has no contract/agreement to
provide reporting services with any party to the
case, any counsel in the case, or any reporter or
reporting agency from whom a referral might have been
made to cover this deposition. Brown Reporting will
charge its usual and customary rates to all parties
in the case, and a financial discount will not be
given to any party to this litigation.

[18] /s/ Mynjuan P. Jones, CCR-B-1422 April 14, 2004

[19] Signature of attorneys present: Date:

[20] /s/ Attorney Name Disc Date

[21] /s/ Attorney Name Disc Date

[22] /s/ Attorney Name Disc Date

[23] /s/ Attorney Name Disc Date

[24] Return this form after review and/or signatures to
the court reporter for inclusion in the record.

[25] Please use reverse side for additional signatures.

[1] DEPOSITION OF BRUCE W. KARRH, M.D./mpj

[2] I do hereby certify that I have read all
questions propounded to me and all answers given by
me on the 14th day of April, 2004, taken before
Mynjuan P. Jones, and that:

[4] 1) There are no changes noted.
2) The following changes are noted:

[6] Pursuant to Rule 30(e) of the Federal Rules of
Civil Procedure and/or the Official Code of Georgia
Annotated 9-11-30(e), both of which read in part:
Any changes in form or substance which you desire to
make shall be entered upon the deposition...with a
statement of the reasons given...for making them.
Accordingly, to assist you in effecting corrections,
please use the form below:

[10]

[11] Page No. Line No. should read:

[12] Page No. Line No. should read:

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[1] DEPOSITION OF BRUCE W. KARRH, M.D./mpj

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[14]

If supplemental or additional pages are necessary,

[15] please furnish same in typewriting annexed to this deposition.

[16]

[17]

BRUCE W. KARRH, M.D.

[18]

Sworn to and subscribed before me,

[19] This the day of , 20 .

[20]

Notary Public

[21] My commission expires: 07:34:47

[22]

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Lawyer's Notes

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